Final Report
Submitted to the

Southern California Association of Governments (SCAG) and the Project Management Team (PMT)

Health Access in San Bernardino and Riverside Counties: Non-Emergency Medical Transportation Needs and Resources

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I. INTRODUCTION

In December 2002, a preliminary announcement was issued on behalf of the San Bernardino Associated Governments (SANBAG) informing interested parties about a soon to be released Request for Proposals (RFP) to conduct a non-emergency medical transportation planning study in San Bernardino and Riverside Counties. In February 2003, the Southern California Association of Governments (SCAG) solicited proposals for the "Health Access in San Bernardino and Riverside Counties: Non-Emergency Medical Transportation Needs and Resources Study" (Health Access Study). The study is a cooperative effort sponsored and managed by San Bernardino Associated Governments (SANBAG) and the Project Management Team (PMT) comprised of the following additional transportation agencies and healthcare organizations:

1.1 PARTICIPATING PUBLIC TRANSPORTATION AND HEALTHCARE ORGANIZATIONS AND AGENCIES

- Riverside County Transportation Commission (RCTC)
- Southern California Association of Governments (SCAG)
- California Department of Transportation (Caltrans – District 8)
- Inland Empire Health Plan (IEHP)
- Molina Healthcare of California
- Kaiser Permanante
- HealthNet of California
- Community Hospital of San Bernardino

The agencies and organizations participating in the study secured Federal Section 5313 funding, as well as, collectively provided the requisite local match funding to conduct the study. In addition to the PMT, advisory participation on project-related issues at various intervals prior to and during the study was obtained from a twenty-five (25) member support group consisting of a variety of healthcare and healthcare-related organizations, transit operators, and community-based organizations, referred to as the Project Development Team (PDT). Appendix A provides a complete listing PMT and PDT organizations and agencies associated with the study.

Judith Norman – Transportation Consultant (JNTC) was selected to conduct the study. The project team developed a comprehensive work plan that proposed a systematic approach to assess and report upon the healthcare access needs of consumers in specified five geographic regions of San Bernardino and Riverside Counties, and to develop recommendations to address those needs.

2. BACKGROUND

2.1 PURPOSE AND OBJECTIVES

The objectives of the study as detailed by the PMT in the RFP, are outlined as follows:

- To qualitatively describe non-emergency medical trip needs in the Inland Empire of Riverside and San Bernardino Counties;

- To quantify non-emergency medical transportation needs in relation to defined geographic sub-areas within the two counties;

- To describe the resources that are potentially available to address these needs and requirements, and to identify the barriers that are local, regional, state or federal in origin and that existing systems confront in meeting those needs;

- To devise recommendations that match resources with needs in relation to defined geographic areas, suggesting demonstration services to be tested; and

- To conduct a planning study of potential value to other California regions by addressing the challenges of non-emergency medical transportation in the Inland Empire.

In addition to the stated objectives developed by the PMT, the JNTC project team viewed the study as an opportunity to achieve the following additional objective:

- To facilitate the continuing education of project stakeholder agencies and organizations, the project team and other interested entities on issues and potential solutions relative to non-emergency medical transportation.

The study work effort was focused upon assessing the NEMT needs of several constituencies including low income families (Medi-Cal/Medicaid population), seniors (Medicare population) and other general public members who may reside at significant distances from specialty medical facilities.

2.2 STUDY AREA PROFILE

The Inland Empire comprised of the two counties of San Bernardino and Riverside is located in the south eastern portion of Southern California, bordering Los Angeles, Imperial, Orange and San Diego counties. The Inland Empire is one of the fastest growing areas in the California, with population figures for San Bernardino County and Riverside County at 1,709,000 and 1,545,000, respectively, or almost 3.3 million combined. San Bernardino County encompasses 20,160 square miles, 90% of which is desert region, with the remainder consisting of the San Bernardino Valley and the San Bernardino Mountains. Riverside County stretches nearly 200 miles across and is comprised of 7,200 square miles of river valleys, low deserts, mountains, foothills and rolling plains. San Bernardino and Riverside Counties decided in the early 1950's to combine many of their resources and decided to identify themselves as the Inland Empire. The expansive geography and diversity of the Inland Empire Region offered the project team an opportunity to explore the issues related to NEMT in a variety of contexts.

2.3 STUDY TASKS

The work effort proposed by JNTC offered a tremendous opportunity to compile, analyze and translate healthcare and public transportation services data and information through completion of the following general tasks, as outlined in the RFP:

Task 1: Public Outreach to Define Non-Emergency Medical Transportation

Task 2: Allocation, Subsidy, Reimbursement & Payment Practices

Task 3: Identifying Needs for Non-Emergency Medical Transportation

Task 4: Identifying Resources for Non-Emergency Medical Transportation Access

Task 5: National Models Addressing Health Care Access Needs

Task 6: Recommendations

Specifically, the study incorporates the findings of both quantitative and qualitative data collection and analysis, and also considers current knowledge and "best practices" relative to NEMT and public transportation funding, and service availability and delivery. Work tasks and activities proposed to be completed by the project team included:

- Collection and incorporation of healthcare member data from Inland Empire Health Plan and Molina;
- Collection and incorporation of healthcare organization facilities location data and other medical services and specialty-related data on members
- Conducting a random digit-dial telephone survey in San Bernardino and Riverside Counties to determine the occurrence of missed medical appointments due to lack of, or limited access to transportation options;
- Completion of GIS and other comparative analyses to incorporate relevant census, population, socioeconomic data, healthcare member and facilities data, transit routes and service areas, telephone survey results, funding levels and other relevant data obtained from outreach activities.
- Focus Groups with healthcare organizations' consumer groups to ascertain their needs relative to healthcare access
- Outreach effort to healthcare organizations, transit operators, and community-based organizations and stakeholders including completion of a questionnaire and/or participation in roundtables
- Completion of transportation and funding interview guides by healthcare organizations within the two counties to assess their current resources
- Review of the Medi-Cal Program in California, specific to funding for medical transportation, from both a statewide and local healthcare organization perspective
- Review of medical transportation models from a national perspective to assess best practices and applicability to the study area

Both industry perspectives relative to NEMT (i.e. healthcare and public transportation) needed to be examined to achieve the broad-based objectives of the study. The project team's work plan was designed to accomplish and in-depth review, comparison and analysis of healthcare and transportation funding and service delivery in the study area.

This report documents the methodology, findings and results for completing each study element, analyzes and compares the findings and results for each element, and details study recommendations.

3. ESTABLISHING STUDY PARAMETERS

3.1 INITIAL PROJECT MEETING

Recognizing the complexity and broad-based nature of the proposed work plan, the project team and the PMT collaborated during the initial project meeting to clarify and define research and overall study parameters for the purposes of:

1. Verifying agreement between the PMT and the JNTC project team upon the focus and direction of the study;

2. Maintaining consistency in approach to completing the various research and analytical tasks outlined in the project work plan;

3. Determining the availability of healthcare member and facilities data;

4. Discussion of the rationale for delineation of geographic study areas; and

5. Ensuring that PMT objectives for the study would be achieved.

Aside from the basic introductions, and discussion of study background and administrative issues, the main topics for discussion included designation of geographic study areas, definition of NEMT and availability and data access, as presented below.

3.2 DESIGNATION OF GEOGRAPHIC STUDY AREAS

In response to questions posed by the project team at the initial project meeting concerning the geographic areas discussed in the RFP, the PMT discussed in detail the rationale for division of the two-county region into five (5) geographic areas. These five geographic areas are described, as follows:

(1) Banning/Beaumont (rural areas with some Health Care Facilities) to Redlands and Downtown Riverside (urban)

(2) Jurupa (extremely low density suburban area adjacent to urban area) to Downtown Riverside (urban)

(3) Barstow (rural area) to Victorville (new urban) and San Bernardino

(4) Victor Valley (new urban in Victorville/Apple Valley and Hesperia but the rest are small rural communities and cities) to San Bernardino

(5) Five zip codes in San Bernardino – urbanized area

These geographic areas were defined to focus the study research effort on identified travel corridors as understood by the PMT, in consideration of the mix of development types throughout the State, for reasons of future applicability. This approach served to enhance the project team's understanding and awareness of the diverse and unique demographic, land-use and travel linkages that characterize the Inland Empire.

3.3 DATA COLLECTION METHODOLOGIES

The JNTC project team proposed a three-tiered consumer outreach/data collection process to obtain, compile and analyze healthcare consumer input and quantitative data specific to Inland Empire communities, as follows:

- Obtaining qualitative input from consumers of non-emergency medical transportation representing various constituencies (e.g. low income families, seniors, etc);

- Collecting and analyzing existing consumer missed appointment information from PMT and PDT sources, as available, or as necessary, establishing a data collection process to capture missed appointment information on consumers from PMT and PDT member medical facilities; and

- Collection of existing consumer-related data and information specific to San Bernardino and Riverside Counties, including demographic and socioeconomic data.

3.3.1 Transit Operator Data Availability Survey

The project team also proposed to collect information on existing services (i.e. service area, routes, schedules, and trip origins, destinations, etc.) from public transit operators providing service in the study area. A Transit Data Availability Survey was distributed to transit operators and agencies on July 16, 2003 (Appendix B). The following transit operators and agencies participated in the survey:

- Victor Valley Transit Authority
- Barstow Area Transit
- Omnitrans
- City of Banning
- City of Beaumont
- Riverside Transit Agency

The findings of this element of the work effort are discussed in greater detail in Section 10 of this report.

3.3.2 Healthcare Organizations Data Availability Survey

JNTC also distributed a Healthcare Data Availability Survey to healthcare organizations on May 12, 2003 (Appendix C). The results of the survey allowed the project team to make a preliminary assessment of healthcare data availability and formats, and to determine additional data collection and research needs. Healthcare Data Availability surveys were received from all healthcare PMT member organizations, including two surveys from non-PMT organizations.

Through administration of the survey, the project team discovered that much of the member and facilities data needed for use in the study was being collected by the PMT healthcare organizations, with the exception of member missed appointment data. Other issues related to project team access to healthcare data are discussed below.

4. HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA) AND STUDY RELATED IMPACTS

The Health Insurance Portability and Accountability Act (HIPAA) of 1996 is a Federal regulation (45 CFR 160 and 164) that became effective in April, 2003. The law provides regulatory guidance to health plans, health care providers and healthcare clearinghouses on a number of issues which include:

- Continuation of healthcare coverage by individuals;
- Ensuring "administrative simplification" and institution of "EDI standards" in the transmittal and processing of health care claims; and
- Delineating requirements for healthcare organizations related to handling of confidential medical and personnel information.

Each one of the five healthcare organizations participating on the study PMT are subject to the requirements outlined in HIPAA. For purposes of this study, the requirements related to confidentiality of Protected Health Information (PHI) (e.g. healthcare member files, claims, encounter files, etc.) and Individually Identifiable Health Information (IIHI) (e.g. name, date of birth, SSN, etc) created unforeseen challenges for the PMT and the project team.

Issues related to access and availability of member-related information necessary for the project team to conduct consumer data collection and analytical activities surfaced during the initial meeting. This ultimately became a major challenge since the core of the work plan proposed by JNTC assumed access to PMT healthcare organizations' member and facilities data.

The project team envisioned working with healthcare organizations to obtain available data in compatible formats, toward the goal of incorporating this and other population and socioeconomic data and information into a Geographic Information System (GIS) for analytical purposes. Inclusion of this data would enrich the quantitative research sufficient to allow formulation of definitive "real world" recommendations, utilizing actual healthcare member information representing all major healthcare organizations in the study area.

4.1 INTERPRETATION OF HEALTHCARE ORGANIZATIONS' INTERNAL HIPAA POLICIES

Although HIPAA incorporates provisions for access to and use of member data and information by outside entities including transit providers, consultants, etc. under certain specified conditions (45 CFR 160.103), each PMT healthcare organization had newly developed internal policies in compliance with HIPAA guidelines, governing the disclosure of member information. The subsequent dilemma for the healthcare organization members of the PMT was ultimately to agree upon a consistent interpretation of each organization's internal policies that would allow project team access to the data.

In view of the fact that this was the first time that many of the healthcare organizations had ever addressed these types of issues, and that any resulting decision would establish precedence for future interpretations of policy, there was initial uncertainty as to how to proceed. Following a review of each individual healthcare organization's internal HIPAA policies by the PMT and the project team, lengthy discussion ensued concerning the proper designation to be assigned to JNTC, and the corresponding process to gain access to the data.

Subsequent discussions and investigations relative to the legal responsibilities of each organization subject to HIPAA, it was determined that the designation of JNTC as either a Business Associate or a Research Associate would be sufficient to allow the project team to utilize member healthcare data for the study.

However, PMT healthcare organizations continued to differ on their organizations' legal interpretation of the intent of the HIPAA regulation. Consequently, the project team in cooperation with the PMT began to explore other methods to collect the necessary healthcare member related data. In addition to pursuing this course of action, JNTC continued to work through the process with each individual PMT healthcare organization to secure access to healthcare organization data.

4.2 FORMULATION OF ALTERNATIVE METHODS OF DATA COLLECTION

As discussed above, the work plan formulated by JNTC proposed using existing healthcare member data for analysis. In addition, anticipating that healthcare organizations would likely have limited or no missed appointment-related data and information (the "key" factor in assessing NEMT needs) the project team's initial strategy outlined a plan to use missed appointment logs to collect information at PMT and PDT healthcare providers and facilities. With assistance and cooperation from healthcare personnel at designated medical facilities, the project team proposed to use logs to record missed appointment information on 1,200 individuals (e.g. incidence of scheduled and missed appointments, reasons, etc.) in two-week intervals over a span of three months. However, the privacy requirements of HIPAA also precluded the use of this approach to collect data.

Alternative methods to collect missed appointment data were discussed and examined by the project team in close consultation with PMT members. There was general agreement on conducting a healthcare member survey, which would be distributed by the PMT healthcare organizations to their members. However, issues relative to PMT responsibilities for distribution, including mailing costs, as well as, the expense involved in receiving returned surveys, tabulation and processing, ruled out this option. In addition, there remained some uncertainty on the part of the PMT healthcare organizations, whether this option was feasible under HIPAA.

JNTC also proposed a door-to-door member survey distribution alternative, which upon further investigation was shown to potentially yield low response rates and be unreliable.

The impact of HIPAA and other internal issues faced by the PMT healthcare organizations participating in the study, prompted JNTC to ultimately propose conducting a telephone survey in the study area to explore the incidence of missed medical appointments due to lack of transportation. This alternative allowed the project team to explore this issue in each of the five geographic areas in both counties, while utilizing a quantitative data collection method that would ensure statistical validity and a corresponding high-level of confidence in the results. The methodology and results of the telephone survey will be covered in detail in Section 5.1.

5. DATA COLLECTION ACTIVITIES

Data and information was collected by the project team for the purposes of systematically building an analytical basis for determining the need for NEMT. The project team utilized the quantitative and qualitative data and information to:

- Develop GIS demographic and socioeconomic descriptions of each of the five study areas discussed below;
- Inventory and evaluate local healthcare and public transportation service and funding resources in the five geographic areas;
- Determine to what extent the lack of access to, or availability of non-emergency medical transportation is a factor in missed medical appointments; and
- To correlate and document healthcare and transportation results and findings to develop informed recommendations.

This section discusses findings of the telephone survey. Data collected from study area public transit agencies and operators is presented later in Section 10.

5.1 TELEPHONE SURVEY

The telephone was conducted the project team of residents 18 years of age or older, living in defined geographic areas in Riverside County and San Bernardino County.

5.1.1 Task Definition and Purpose

The project team undertook this task in an effort to quantify the need for non-emergency medical transportation in the five geographic areas in the two counties. The purpose of the survey was to determine to what extent the lack of access to or availability of transportation is a factor in missed medical appointments.

In general, telephone surveys provide researchers with information from populations of relevant interest. Survey samples of a larger populations measure opinions, beliefs and attitudes within identifiable statistical limits of accuracy at specific points in time. While using the most sophisticated procedures to collect and analyze the data, surveys provide information and direction, not necessarily formulas and predictions.

The telephone survey conducted for this project consisted of one thousand (1,000) telephone interviews, with residents 18 years of age or older living within pre-selected zip codes within the defined study areas. This survey provided current information on incidence of missed medical appointments within the last twelve months.

A review of the study design and the methods used to obtain a sample representative of all adults 18 and older living in the study area is presented below.

5.1.2 Methodological Approach

Questionnaire Design

The project team developed a first draft of the questionnaire used to conduct the survey through conversion of an initial concept questionnaire developed earlier in the study process, originally envisioned as a self-administered survey instrument. The questionnaire development process required the prioritization of questions, resulting in the exclusion of some questions, and subsequently evolved through a series of two additional iterations before arriving at a final version.

The final version of the questionnaire consisted of an introduction, qualifying questions, and 17 substantive questions, which are a combination of categorical questions, open-end questions, and demographic questions (Appendix D). Following review and approval, a professional translator translated the questionnaire into Spanish.

Questionnaire Programming

The project team programmed the final version of the questionnaire for computer-assisted telephone interviewing (CATI). CATI, an interactive PC-based software, displays the question wording on a computer screen for the interviewer to read to the respondent. The interviewer enters each response directly into the computer via the computer's keyboard. CATI programs accept both alpha and numeric responses. The CATI program manages the logic of the questionnaire, determining which question the interviewer asks the respondent.

Sample Design

The project team used a Random Digit (RDD) sample for the study. A computer generates the RDD sample from a database of *working blocks* in the zip codes. A block consists of 100 contiguous telephone numbers identified by the first two digits of the last four digits of a telephone number. For example, in the telephone number 923-5347, "53" is the block. A working block contains one or more listed telephone numbers. The computer program assigns each exchange, the first three digits of a telephone number, to one or more zip codes.

The computer generates the RDD sample using a stratified random sampling procedure. A stratified random sample divides the population of sampling units into subpopulation called strata. The computer algorithm selects a separate sample from the sampling units in each stratum. Project team members used the zip codes to stratify this sample.

The computer algorithm used for this sample distributes the telephone numbers across all eligible blocks in proportion to their density of listed telephone households. The algorithm organizes all blocks within a zip code in ascending order by area code, exchange, and block number. After determining a quota (number of completed interviews) for the zip codes, the algorithm calculates a sampling interval by summing the number of listed residential numbers in each eligible block within the zip codes and dividing that sum by the number of sampling points assigned to the zip codes. Since telephone exchange boundaries do not correspond precisely to zip code boundaries, the algorithm assigns telephone exchanges to a zip code based on the proportion of the exchange falling within the zip code.

From a random start point between zero and the sampling interval, the computer systematically selects blocks in proportion to their density of listed households. After selecting a block for inclusion in the sample, the computer algorithm appends a two-digit random number in the range 00 to 99 to the exchange and block to form a 10-digit telephone number.

This process eliminates challenges resulting from unpublished telephone numbers. Phone books fail to represent the important population of people with unlisted phone numbers; that is, those people who do not allow the telephone company to publish their telephone number. Since over 50 percent of all Riverside County and San Bernardino County households do not allow the telephone companies to publish their telephone numbers, this process provided a representative sample of the adults 18 and older residing in the selected zip codes.

By definition, samples represent a larger population or universe of interest. All sample surveys are subject to sampling error; that is, the extent to which the results may differ if project team members conducted a complete census of the opinions of every eligible individual in the sample area. The size of the potential error depends on the percentage distributions (i.e., the number of respondents selecting each answer category) and the number of interviews. The more disproportionate the percentage distributions or the larger the sample size, the smaller the probability of error resulting from a sample.

A sample size of 1,000 has a confidence interval estimate of + 3.1 percentage points at the 95 percent confidence level assuming conservative 50/50 response proportions. Smaller subgroups of the population, e.g. age groups and income segments, have larger confidence intervals. Table 5-1a displays the sampling errors for different sample sizes and proportions. The percentages indicate the range (plus or minus the figure shown) within which the results may vary 95 times out of 100 for each sample size.

Table 5-1a
SAMPLING ERROR
(PERCENTAGE POINTS)

Sample Size	Percentage Distribution				
	50/50	60/40	70/30	80/20	90/10
1000	3.1%	3.0%	2.8%	2.5%	1.9%
800	3.5%	3.4%	3.2%	2.8%	2.1%
600	4.0%	3.9%	3.7%	3.2%	2.4%
400	4.9%	4.8%	4.5%	3.9%	2.9%

As Table 5-1a indicates, the sampling error increases as the sample size decreases. This means less reliable results with small subgroup sample sizes. Occasionally a small sample size for a particular subgroup precludes any reliable analysis.

For example, assume 1,000 people responded to a particular question. In their responses, 60 percent said answer 1 and 40 percent said answer 2. In Table 5-1a, the cell representing 1,000 interviews and responses of 60 percent and 40 percent has a confidence interval of 3.0 percentage points. Therefore, 95 times out of 100, the average of repeated samples (conducting a complete census) would be somewhere between 57 percent and 63 percent for response 1, with 60 percent the most likely or probable result.

The following zip codes defined the area of interest for the survey. The survey population consisted only of individuals living in the geographic study areas corresponding to the following zip codes. The zip codes also facilitate the linking of the survey data to the larger GIS database.

San Bernardino County

Area 1: Barstow
92311 (Barstow)

Area 2: Fontana/San Bernardino
92313 (Grand Terrace)
92316 (Bloomington)
92324 (Colton)
92335 (Fontana)
92336 (Fontana)
92337 (Fontana)
92346 (Highland)
92376 (Rialto)
92377 (Rialto)
92401 (San Bernardino)
92404 (San Bernardino)
92405 (San Bernardino)
92407 (San Bernardino)
92408 (San Bernardino)
92410 (San Bernardino)
92411 (San Bernardino)

Area 3: High Desert
92301 (Adelanto)
92307 (Apple Valley)
92308 (Apple Valley)
92345 (Hesperia)
92368 (Oro Grande)
92371 (Phelan)
92392 (Victorville)
92394 (Victorville)

Riverside County

Area 4: Banning/Beaumont
92220 (Banning)
92223 (Beaumont)
92320 (Calimesa)

Area 5: Jurupa
91752 (Mira Loma)
92509 (Riverside)

The project team recognized that randomly distributing the number of completed interviews in each of the geographic areas proportionate to population would result in unacceptably small sample sizes in the Barstow, Banning/Beaumont, and Jurupa areas. Consequently, the research design incorporated quota sampling to assure sufficiently large sample sizes in each geographic area.

Quota sampling is a sampling technique involving the completion of a predetermined number of interviews in each of the five geographic areas. This sampling approach facilitates the reliable analysis of the survey findings by each of the five geographic areas. Achieving results representing the two counties necessitated the development of weights to adjust the sample sizes to match the actual census distribution of the population in the five geographic areas. Applying these weights to the data file created a data file representative of individuals 18 years of age or older in the target zip codes.

Table 5-1b shows the unweighted and weighted distribution of interviews completed in each of the five geographic areas.

Table 5-1b
SAMPLE DISTRIBUTION

Zip Code	Unweighted	Weighted
San Bernardino County		
Barstow	100	31
Fontana/San Bernardino	465	602
High Desert	185	234
Riverside County		
Banning/Beaumont	125	50
Jurupa	125	82
Total	1,000	1,000

In the Riverside and San Bernardino areas, men comprise approximately 48 percent of the adult population and women comprise approximately 52 percent of the population. Previous research indicates that more women than men are the primary health care decision makers. Consistent with this information, the project team decided not to control for the gender of the respondent. Using this approach, the sample consisted of 64 percent women and 36 percent men.

The CATI software contained a sample manager. The sample manager program monitored the sample and the disposition of each number. This ensured each telephone number in the sample universe an equal probability of selection. The application of scientific methods including the use of an RDD sample, careful sample administration, and adherence to thorough callback procedures assured all individuals residing in the survey area an equal probability of inclusion in the survey. The project team followed accepted industry standards to obtain a sample inclusive of the attitudes and opinions of all ethnic and socioeconomic groups.

Table 5-1c compares Census population data (18 years of age or older) for the target zip codes with the survey findings on the attributes of age and income. Please remember that in voluntary opinion and attitude telephone surveys certain respondents refuse to answer questions about their age or income.

Table 5-1c
SAMPLE COMPARISON: U.S. CENSUS

	Census Population 18+	Survey Sample
Less than $10,000	10.3%	7.0%
$10,000 to $14,999	7.4%	5.5%
$15,000 to $19,999	7.2%	6.8%
$20,000 to $24,999	7.4%	6.7%
$25,000 to $29,999	6.8%	4.4%
$30,000 to $34,999	6.7%	4.7%
$35,000 to $39,999	6.1%	3.8%
$40,000 to $49,999	11.0%	5.8%
$50,000 to $59,999	9.4%	7.5%
$60,000 or more	27.7%	15.7%
Refused	-%	32.0%
Age		
18-24 years old	15.1%	15.7%
25-34 years old	20.9%	19.0%
35-44 years old	23.6%	17.6%
45-54 years old	16.8%	20.1%
55-64 years old	10.0%	9.9%
65 and older	13.6%	16.2%
Refused	-%	1.6%

Data Collection

Project team members utilized the services of a professional call center with extensive interviewing experience, having conducted numerous surveys reflecting diverse respondent populations. The use of a centralized facility allowed full monitoring of the interviewing process. The call center trained each interviewer in standardized interviewing techniques to ensure uniform interviewing standards. The project team briefed the interviewers selected to conduct the interviews on the specific nuances of this project. The telephone center maintained an average ratio of one supervisor to ten interviewers throughout the interviewing process. In addition call center supervisors monitored at least 15 percent of the interviews. These quality control procedures maximized the accuracy of the interviewing.

After greeting the potential respondent and identifying themselves, the professional telephone interviewers used the following questions to identify the appropriate respondent in each household. The interviewers first established the age of the respondent (Question A-Appendix D), including only individuals 18 years of age of older. If they could not speak with an individual in the household who was at least 18 years of age, then the interviewer politely concluded the interview.

A. Today, I need to speak with an adult in your household who is 18 or older. Are you 18 years of age or older? (**IF "NO," ASK:**) May I please speak with someone in your household who is 18 or older?

1. Yes (**ASK Q. B**)
2. No (**THANK AND TERMINATE**)
3. (Refused) (**THANK AND TERMINATE**)

After determining the age eligibility of the respondent, the interviewers then asked them for their home zip code (Question B-Appendix D). The interviewer continued the interview only with those individuals residing in the target zip codes.

B. What is your zip code at your home address?

The interviews were conducted between June 21 and June 30, 2004, and between August 6 and August 11, 2004 on weekday evenings and weekends. Because of differences in lifestyle-driven schedules and the difficulty of reaching all people within a given time of day or day of the week, the interviewers called each number up to three times. To ensure the accuracy and validity of the sample, the callbacks occurred on different days of the week and at different times of the day.

The interviewers conducted only one interview per household. The actual interviews lasted an average of 4 minutes and 14 seconds. The call center conducted 862 interviews in English and 138 interviews in Spanish.

Data Processing

At the conclusion of the interviewing, the project team cleaned and tabulated the data. The process of cross tabulating the data allowed response comparisons by income level, age, gender, etc. The cross tabulation analysis used the following demographic and geographic subgroups.

Q.B. Geographic Area

Barstow
Fontana/San Bernardino
High Desert
Banning/Beaumont
Jurupa

Q.3 Transportation to Appointments

Drive Vehicle
Friend/Family
Public Transit
Walk/Bicycle
Other

Q.8 Age

18-to-24 years old
25-to-34 years old
35-to-44 years old
45-to-54 years old
55-to-64 years old
65 years old or older

Q.9 Health Insurance

Yes
No

Q.11/12 Receive Medi-Cal/Medicare

Both
Medi-Cal
Medicare
No

Q.13 Disability

Yes
No

Q.14 Household Size

One
Two
Three
Four
Five or more

Q.15 Number of Children Under Age 18

None
One
Two
Three or more

Q.16 Annual Income

Less than $20,000 a year
$20,000-to-$35,000 year
$35,000-to-$60,000 year
More than $60,000 a year

Q.18 Gender

Men
Women

Q.19 Interview Language

English
Spanish

In the analytical process, project team members used frequency distributions, means, and cross-tabulation tables. We utilized the software packages SPSS and Wincross to run and review the cross-tabulation tables and means looking for significant or relevant findings. In analyzing the data, the project team used Independent T-Tests to measure differences in means and Independent Z-Tests and Chi-Square values for percentages. The analysis reports all statistically significant differences at the 95 percent level.

5.2 SURVEY FINDINGS

The detailed and summary results of the telephone survey are presented below.

5.2.1 Type Medical Facility Used

The study first asked the respondents the question: "When you need health care, would you say you go most often to a hospital, a clinic, or a doctor's office?" The majority of the respondents said they *most often* went to a doctor's office for their health care needs.

As the numbers in Figure 1 (below) indicate, just over half of the respondents (52 percent) in the study usually go to the doctor's office for their health care needs. Less than one quarter (24 percent) of them said they go to a clinic. Twenty-one percent of the respondents go *most often* to a hospital for their health care needs. One percent of them indicated that they typically go somewhere other than a doctor's office, clinic or hospital for their health care needs.

Figure 1
Type Medical Facility Use

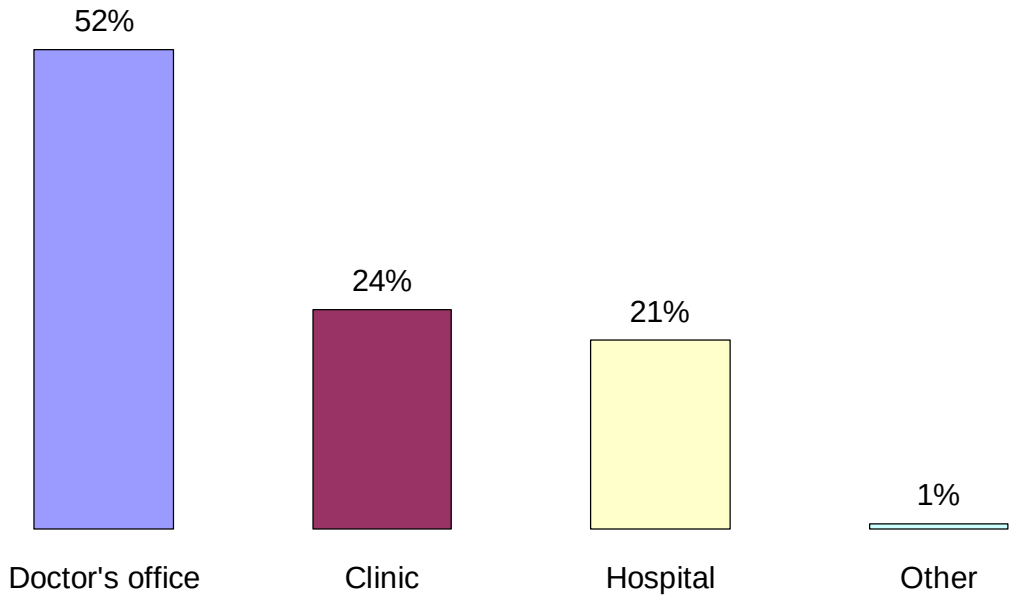


Table 5-2a shows the type of medical facilities the respondents said they used most often cross-tabulated by geographic area.

Table 5-2a
TYPE MEDICAL FACILITY USE
BY GEOGRAPHIC AREA

	Total	Barstow	Fontana/ San Bernardino	High Desert	Banning/ Beaumont	Jurupa
Hospital	20.6%	16.0%	22.6%	16.2%	15.2%	23.2%
Clinic	23.8%	9.0%	28.4%	15.1%	31.2%	16.0%
Doctor's office	52.2%	68.0%	44.7%	67.0%	52.0%	58.4%
Other	0.6%	3.0%	0.9%	0.0%	0.0%	0.0%
DK/Refused	2.9%	4.0%	3.4%	1.6%	1.6%	2.4%
Base	1,000	100	465	185	125	125

The following observations address the subgroup differences in medical facility utilization:

- Looking at the geographic areas, residents in Barstow (68 percent) and the High Desert (67 percent) more often use the doctor's office for their health care needs. More residents in Fontana/San Bernardino (28 percent) and Banning/Beaumont (31 percent) than in the other areas reported that they used medical clinics for their health care needs.

- Respondents 18 to 44 years of age were more likely than were respondents over age 45 to use the hospital. In addition, respondents over age 55 evidenced more of a tendency to use a doctor's office for their health care needs. Consistent with these findings, 71 percent of the respondents who have Medicare said they most often went to a doctor's office for their medical needs.

- Men (26 percent) more than women (18 percent) go to hospitals. Women (56 percent), on the other hand, reported using a doctor's office more often than did men (45 percent).

- Households with five or more members or three or more children are also more likely than are other households to use a medical clinic.

- Households with health insurance are significantly more likely to go to the doctor's office (59 percent) than are households with no health insurance (28 percent). Conversely, households with no health insurance are notably more likely to take their medical needs to a clinic (39 percent) than are households with health insurance (20 percent).

5.2.2 Name of Medical Facility Used

The respondents were asked: "What is the name of the (hospital/clinic/doctor's office) that you go to most often for your health care needs?" Table 5-2b shows that 21 percent of them answered that they typically used a Kaiser Permanente facility for their health care needs. Similarly, 20 percent of the respondents mentioned a specific doctor by name, e.g., Dr. Jones that they typically used for their health care needs. Table 5-2b contains a list of the medical facilities the respondents said they used *most often* for their health care needs.

Table 5-2b
NAME OF THE HOSPITAL/CLINIC/DOCTOR USE MOST OFTEN

Kaiser Foundation Hospital/Kaiser Permanente	20.7%
Named Specific Doctor/Doctor's Office	19.5%
Beaver Medical Group/Clinic	7.1%
Loma Linda University Medical Center	4.3%
Arrowhead Regional Medical Center	3.8%
La Salle Medical Associates	1.9%
San Bernardino Medical Group	1.2%
Saint Mary Regional Medical Center	1.1%
High Desert Primary Care Medical Group	1.0%
Desert Valley Medical Group	0.9%
VA/Veteran's Hospital	0.8%
Riverside Medical Clinic	0.8%
Victor Valley Community Hospital	0.8%
Family Medical Clinic/Center	0.7%
Hi-Desert Medical Center	0.6%
US Family Care Medical Center	0.6%
United Family Care	0.5%
Pinnacle Medical	0.5%
Saint Bernardine Medical Center	0.5%
Family Practice Associates	0.4%
Redlands Community Hospital	0.4%
SAC Health Systems	0.4%
Guardian Medical Group	0.4%
Barstow Community Hospital	0.4%
San Gorgonio Memorial Hospital	0.3%
Chino Valley Medical Center	0.3%
Saint Jude Medical Center	0.3%
Desert Valley Hospital	0.3%
Riverside Medical Center	0.2%
Primecare Medical Group	0.2%
Parkview Community Hospital	0.2%
Citrus Medical Group	0.1%
Riverside Community Hospital	0.1%
Inland Health Care Group	0.1%
Riverside General Hospital	0.1%
Other Medical Facility	13.1%
None/No Specific Facility	0.2%
Don't know/Can't Remember/Refused	14.9%
Base	1000

5.2.3 Primary Transportation Mode for Health Care

The next question queried the respondents: "How do you get to your scheduled medical treatments, tests or appointments?" Table 5-2c displays the responses to the question with cross tabulations by the respondents' geographic area, age, household income, whether they receive Medicare or Medi-Cal, and the language used to conduct the interview.

Table 5-2c
MODE OF TRANSPORTATION FOR HEALTH CARE BY DEMOGRAPHIC SUBGROUPS

	Drive Self	Friend/ Family	Public Transit	Walk/ Bicycle	Base
Total	84.3%	6.9%	5.1%	2.3%	1,000
Geographic Area					
Barstow	83.0%	14.0%	0.0%	2.0%	100
Fontana/San Bernardino	82.2%	6.0%	6.7%	3.7%	465
High Desert	91.4%	5.4%	2.2%	0.0%	185
Banning/Beaumont	84.0%	9.6%	4.0%	0.8%	185
Jurupa	80.8%	12.8%	4.0%	0.0%	125
Age					
18 to 24 years old	73.6%	12.4%	7.4%	5.0%	149
25 to 34 years old	86.2%	3.2%	7.8%	2.4%	184
35 to 44 years old	86.6%	3.9%	5.9%	2.9%	176
45 to 54 years old	90.3%	4.5%	3.3%	1.3%	188
55 to 64 years old	88.2%	5.2%	2.6%	0.0%	108
65 or older	81.0%	12.9%	2.8%	1.0%	180
Household Income					
Less than $20K	71.1%	9.6%	12.4%	4.9%	193
$20K to $35K	86.7%	8.4%	2.5%	1.6%	154
$35K to $60K	96.9%	1.2%	0.4%	0.8%	165
$60K or more	98.8%	0.4%	0.8%	0.0%	163
Medicare/Medi-Cal					
Both	59.1%	17.4%	9.6%	8.5%	61
Medi-Cal only	70.8%	10.8%	12.4%	3.8%	121
Medicare only	83.4%	12.4%	2.7%	0.0%	136
Neither	89.1%	4.1%	3.8%	1.9%	683
Dominant Language					
English	87.3%	6.3%	3.6%	1.5%	862
Spanish	65.6%	10.7%	14.3%	7.1%	138

Not surprising, a dominant proportion of the respondents drive themselves to their scheduled medical treatments, tests, or appointments. As the findings in Table 5-2c indicate, 84 percent of the respondents drive their own car, truck, van, or motorcycle for their health care needs. Transportation provided by friends or family members, accounts for a much smaller share of health care transportation (7 percent) in the study. Likewise, five percent of the households use public transportation to get to their medical treatments, tests or appointments.

Table 5-2c also illustrates several other interesting findings:

- Mode of transportation does not evidence major differences across the five geographic areas. Respondents living in the High Desert (91 percent) tended to drive their own vehicle for their scheduled medical treatments, test or appointments more than respondents do in the other four areas. Dependence on a friend or family member appears higher among those living in the Barstow (14 percent) and Jurupa (13 percent) study areas. Fontana/San Bernardino residents (7 percent) evidenced the most dependence on public transportation as a mode of travel for their health care needs.

- Utilization of public transportation for health care needs declines with the age of the respondent. Specifically, the use of public transportation for health care transit needs decreases from 7 percent of the respondents 18 to 24 years of age to 3 percent of the respondents 65 years of age or older.

- Households earning less than $20,000 a year are noticeably more dependent on public transportation for their health care needs than are households with higher annual incomes.

- Dependence on public transportation for health care needs is higher in households that receive Medi-Cal (12 percent).

- Households consisting of five or more members (9 percent) and households with 3 or more children under age 18 (11 percent) evidenced a greater reliance on public transportation for their health care needs than smaller households with fewer children.

- Spanish speaking households (households where the interview was conducted in Spanish) rely on public transportation (14 percent) and walking or riding a bicycle (7 percent) for their health care needs more frequently than do English speaking households (4 percent used public transportation; 2 percent walked or rode a bicycle).

5.2.4 Missed Medical Appointments

Interviewers also asked if the respondent had missed or rescheduled any medical treatments, tests or appointments at a doctor's office, clinic, lab or hospital in the past 12 months using the question: "Thinking about the past 12 months, have you missed or had to reschedule any medical treatments, tests or appointments at a doctor's office, clinic, lab or hospital?" In addition, the question was asked: "Again thinking about the past 12 months, has anyone in your household other than yourself, like a child or a parent, missed or had to reschedule any medical treatments, tests or appointments at a doctor's office, clinic, lab or hospital?"

Table 5-2d reports the findings to these two questions cross-tabulated by geographic region.

Table 5-2d
MISSED APPOINTMENTS: SELF AND HOUSEHOLD MEMBERS
BY GEOGRAPHIC AREA

	Total	Barstow	Fontana/ San Bernardino	High Desert	Banning/ Beaumont	Jurupa
Household missed	35.1%	34.0%	35.9%	34.6%	35.2%	30.4%
Self missed	25.7%	27.0%	25.4%	26.5%	30.4%	22.4%
Household member missed	17.3%	14.0%	18.1%	16.8%	15.2%	15.2%
No/Refused	64.9%	66.0%	64.1%	65.4%	64.8%	69.6%
Base	1,000	100	465	185	125	125

As the results in Table 5-2d indicate:

- Thirty-five (35) percent of the households—the respondent, a household member or both—rescheduled or missed a medical treatment or appointment in the past 12 months. Specifically, 26 percent of the respondents said they personally had missed or rescheduled a medical treatment or appointment during the previous 12 months. Moreover, 17 of the respondents said that another member of the household had rescheduled or missed a medical treatment or appointment in the past 12 months.

- The proportion of households that rescheduled or missed an appointment evidenced no noteworthy differences across the five geographic areas. Similar percentages of the households in each of the five geographic areas missed or rescheduled appointments in the last 12 months.

Table 5-2e shows the incidence missed or rescheduled appointments cross-tabulated by their primary mode of transportation for health care needs.

Table 5-2e
MISSED APPOINTMENTS: SELF AND HOUSEHOLD MEMBERS
BY MODE OF TRANSPORTATION FOR HEALTH CARE

	Total	Drive Self	Friend/ Family	Public Transit	Walk/ Bicycle
Household missed	35.1%	35.7%	35.1%	31.9%	12.6%
Self missed	25.7%	25.7%	29.8%	20.8%	11.2%
Household member missed	17.3%	18.1%	12.9%	18.7%	1.3%
No/Refused	64.9%	64.3%	64.9%	68.1%	87.4%
Base	1,000	840	80	45	20

Table 5-2e shows that the survey did not identify any differences in the number of missed or rescheduled appointments between households that use public transportation as their primary mode of transportation to their appointments (32 percent missed or rescheduled appointments) and households that drove themselves (36 percent missed or rescheduled appointments) or households that rode with a family member or friend (35 percent missed or rescheduled appointments). Only those respondents who walked or rode a bicycle missed or rescheduled notably fewer appointments (13 percent missed or rescheduled an appointment).

The survey results also evidenced the following demographic subgroup findings for those who missed or rescheduled an appointment:

- The incidence of missed appointments does not vary by geographic area. This means that the same proportion of respondents in each of the five geographic areas missed or rescheduled a medical treatment, test, or appointment because of problems with their transportation.

- Respondents 25 to 34 years old (53 percent missed or rescheduled appointments) 55 to 64 years old (55 percent missed or rescheduled appointments) missed more appointments than other age groups.

- Households with annual incomes of $35,000 to $60,000 (54 percent missed or rescheduled appointments) or over $60,000 (55 percent missed or rescheduled appointments) also reported missing or rescheduling more appointments.

- Women (46 percent missed or rescheduled appointments) missed or rescheduled appointments more often than did men (38 percent missed or rescheduled appointments).

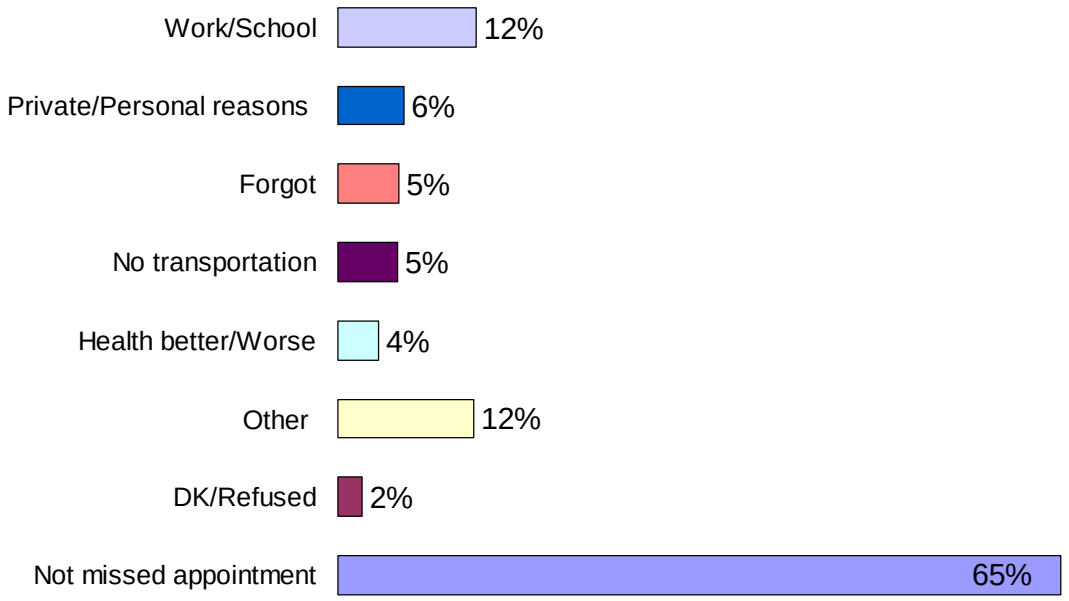
- Respondents with disabilities limiting their mobility missed more appointments (65 percent missed or rescheduled appointments) than did households with no disabled members (40 percent missed or rescheduled appointments).

- English speaking respondents (45 percent missed or rescheduled appointments) rescheduled or missed more appointments than Spanish speaking respondents (28 percent missed or rescheduled appointments).

5.2.5 Reason Missed Medical Appointments

The survey also contained a question asking the respondents: "As you know, people miss or reschedule medical treatments, tests or appointments for a number of different reasons. Would you please tell me why you missed or rescheduled any medical treatments, tests or appointments?" For household members, the questionnaire also asked the question: "Would you please tell me why they [the household member] missed or rescheduled any medical treatments, tests or appointments?" Figure 2 graphically displays the findings to these two questions.

Figure 2
Reason Missed Appointment



The survey respondents cited several different reasons for missing or rescheduling medical treatments, tests or appointments:

- Five percent of the respondents—either the respondent or a member of their household—missed or rescheduled their health care due to a lack of transportation. Twelve percent of them experienced work or school conflicts. They also missed appointments because of private matters or personal reasons (6 percent). Five percent of them admitted that they simply forgot about the appointment (5 percent). Changes in their health—either better or worse—prompted 4 percent of the respondents or their household members to miss or reschedule a medical treatment or appointment.

Table 5-2f lists the reasons respondents cited for either themselves or a family member missing or rescheduling a medical treatment, test, or appointment cross-tabulated by geographic region.

Table 5-2f
REASON MISSED APPOINTMENTS: SELF AND HOUSEHOLD MEMBERS
BY GEOGRAPHIC AREA

	Total	Barstow	Fontana/ San Bernardino	High Desert	Banning/ Beaumont	Jurupa
Not missed appointment	64.9%	66.0%	64.1%	65.4%	64.8%	69.6%
Missed appointment	35.1%	34.0%	35.9%	34.6%	35.2%	30.4%
Could not get off work/School	12.5%	9.0%	14.0%	10.3%	11.2%	9.6%
Private Matter/Personal reasons	5.9%	12.0%	6.0%	4.9%	4.8%	6.4%
Forgot	5.5%	3.0%	6.5%	4.9%	4.0%	1.6%
Lack of transportation	5.4%	2.0%	4.9%	5.9%	9.6%	5.6%
Health better/Worse	3.7%	3.0%	2.4%	5.9%	5.6%	5.6%
Other	12.2%	9.0%	12.5%	13.5%	11.2%	8.8%
Don't know/Refused	2.2%	5.0%	1.9%	2.7%	2.4%	1.6%
Base	1,000	100	465	185	125	125

The findings displayed in Table 5-2f indicate that a lack of transportation as a reason for missing or rescheduling health care is generally consistent across the five geographic areas of the study. Lack of transportation leading to rescheduled or missed appointments is more of a problem in the Banning/Beaumont area (10 percent) than it is in the Barstow area (2 percent). Otherwise, none of the geographic areas showed a significantly smaller or larger proportion of rescheduled or missed appointments due to a lack of access to transportation.

Table 5-2g shows the reasons respondents cited for either themselves or a family member missing or rescheduling a medical treatment, test, or appointment cross-tabulated by their principal mode of transportation for their health care needs.

Table 5-2g
REASON MISSED APPOINTMENTS: SELF AND HOUSEHOLD MEMBERS
BY MODE OF TRANSPORTATION FOR HEALTH CARE

	Total	Drive Vehicle	Friend/ Family	Public Transit	Walk/ Bicycle
Not missed appointment	64.9%	64.3%	64.9%	68.1%	87.4%
Missed appointments	35.1%	35.7%	35.1%	31.9%	12.6%
Could not get off work/School	12.5%	14.1%	3.4%	4.7%	5.6%
Private Matter/Personal reasons	5.9%	6.5%	2.9%	0.0%	5.6%
Forgot	5.5%	5.8%	6.7%	0.0%	5.6%
Lack of Transportation	5.4%	3.6%	16.6%	16.1%	0.0%
Health better/Worse	3.7%	3.7%	5.4%	0.0%	0.0%
Other	12.2%	12.3%	13.1%	14.9%	5.6%
Don't know/Refused	2.2%	2.3%	1.0%	3.9%	1.3%
Base	1,000	840	80	45	20

Interestingly, respondents who depended on another person or party for their transportation to medical appointments missed or rescheduled appointments more frequently than respondents who controlled their mode of transportation.

As the results in Table 5-2g show, four percent of the households that drove their own vehicle acknowledged a missed appointment attributable to transportation problems. Similarly, transportation problems did not hinder the respondents who said they walked or rode a bike to their medical appointments. None of the households that walked or rode a bicycle to their medical appointments missed or rescheduled an appointment in the past 12 months.

Comparing those findings with households that rode with family or friends or used public transportation, in the past 12 months, 16 percent of the households (8 respondents) that depended on public transportation linked the missed or rescheduled appointment to a lack of transportation. Likewise, transportation difficulties forced 17 percent of the households (11 respondents) that relied on a friend or family member as their travel mode to miss or reschedule an appointment.

Table 5-2h shows the reasons respondents cited for either themselves or a family member missing or rescheduling a medical treatment, test, or appointment cross-tabulated by their principal mode of transportation for their health care needs with the percentages based on the entire survey sample base of 1,000 interviews (e.g. the total population).

Table 5-2h
REASON MISSED APPOINTMENTS: SELF AND HOUSEHOLD MEMBERS
BY MODE OF TRANSPORTATION FOR HEALTH CARE
BASED ON THE TOTAL SAMPLE

	Total	Drive Vehicle	Friend/ Family	Public Transit	Walk/ Bicycle
Could not get off work/School	12.5%	11.9%	0.2%	0.2%	0.1%
Private Matter/Personal reasons	5.9%	5.4%	0.2%	0.0%	0.1%
Forgot	5.5%	4.9%	0.5%	0.0%	0.1%
Lack of Transportation	5.4%	3.0%	1.1%	0.8%	0.0%
Health better/Worse	3.7%	3.2%	0.4%	0.0%	0.0%
Other	12.2%	10.3%	0.9%	0.8%	0.1%
Don't know/Refused	2.2%	1.9%	0.1%	0.2%	0.0%
Base	1,000	1,000	1,000	1,000	1,000

Households that depend on a source other than themselves for their health care transportation needs (i.e., public transportation or a friend/family member) reported missing or rescheduling tests, treatments, and appointments more frequently than did households that had their own transportation source. However, this group represents a very small percentage of the total sample and therefore the total population.

The survey found that 16 percent of the respondents *who primarily rode public transportation* to their health care tests, treatments or appointments linked a missed or rescheduled appointment in the past 12 months to transportation problems. Similarly, transportation problems caused 17 percent of the households that *typically received transportation from a friend or family member* to miss or reschedule at least one appointment over the past 12 months.

As a percentage of the *total sample*, that is, a percentage of all respondents, only 1 percent depended on public transportation for their health care needs and missed an appointment because of problems with their transportation. Likewise, as a percentage of the total sample, only 1 percent depended on family or friends for their health care needs and missed an appointment because of problems with their transportation.

Dependence for health care transportation on the public transit system appears highest in the Fontana/San Bernardino geographic area. Consequently, respondents in this area are more likely to have a problem with missed or rescheduled appointments due to problems with public transportation. However, the small sample sizes preclude determining concretely if respondents in the Fontana/San Bernardino area have more of a problem with missed or rescheduled appointments resulting from problems with public transportation than do respondents in the other four geographic areas in the study.

5.2.6 Health Insurance

The studied queried respondents about their health insurance: "Do you currently have health insurance that includes some type of hospitalization coverage?" It also asked about health plans: "What is the name of your primary health plan?" Table 5-2i lists the percentage of respondents covered by health insurance and the different health plans providing their coverage.

Table 5-2i
HEALTH INSURANCE

Yes	**78.4%**
Kaiser	20.2%
Blue Cross of California	9.0%
Pacificare/Secure Horizons	6.6%
Health Net	4.8%
Blue Shield of California	4.8%
Medi-Cal	4.7%
Medicare	4.7%
IEHP	2.3%
Aetna	1.8%
Molina	1.7%
Champus/Tricare	1.2%
Cigna	1.2%
United Health Care	0.9%
VA/Veteran's Administration	0.5%
Scan	0.5%
Universal Care	0.5%
Risk management	0.4%
UHP	0.3%
AARP	0.3%
Unicare	0.2%
Other	5.7%
Don't know/Refused	6.2%
No Health Insurance	**20.1%**
Refused	1.5%
Base	1,000

Table 5-2i illustrates that 78 percent of the households stated that they had health insurance that included some type of hospitalization. Twenty percent of them said they had no health insurance. Kaiser provides health insurance to 20 percent of the respondents. Other insurers providing coverage included Blue Cross of California (9 percent) and Pacificare/Secure Horizons (7 percent). Table 5-2i provides a complete list of the insurance providers mentioned by the respondents.

The survey also contained two questions designed to identify Medi-Cal and Medicare recipients: "Do you receive Medi-Cal?" and "Do you receive Medicare?" Table 5-2j lists the percentage of respondents who said they received Medi-Cal and Medicare, those who received just Medi-Cal, those who received just Medicare, and those who received neither Medi-Cal nor Medicare.

Table 5-2j
RECEIVE MEDI-CAL OR MEDICARE

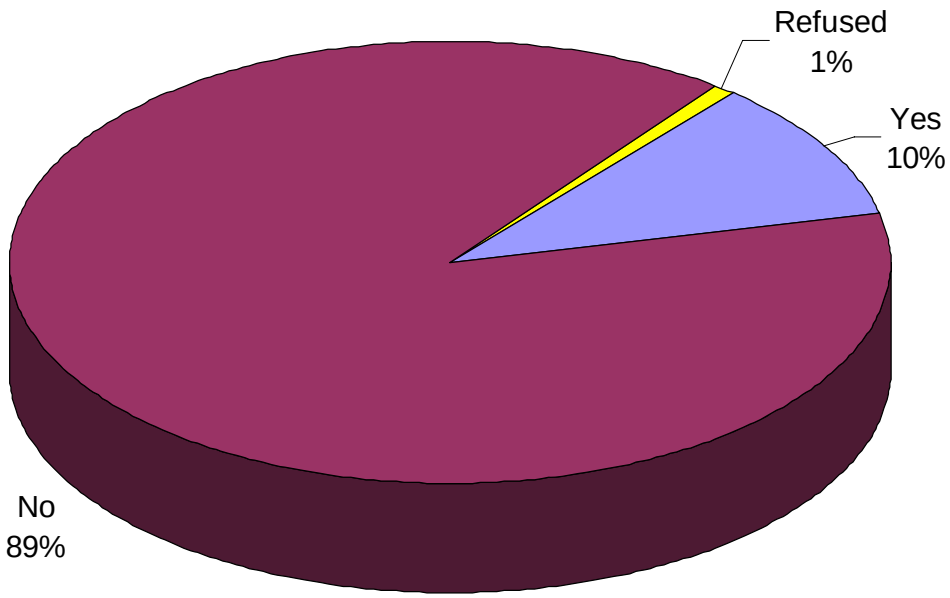
Both	6.1%
Medi-Cal only	12.1%
Medicare only	13.6%
No	68.3%
Base	1,000

Looking at the findings in Table 5-2j, note that six percent of the respondents said that they received Medi-Cal and Medicare. Twelve percent of the households received only Medi-Cal while 14 percent of them indicated that they received only Medicare.

5.2.7 Disability

Interviewers asked respondents about mobility problems resulting from a physical disability: "Do you, or does anyone in your household, have a physical disability such that you or your family member need assistance getting to work, school, shopping or other activities that require transportation?" Figure 3 displays the results to this question.

Figure 3
Physical Disability Requiring Assistance with Transportation



The findings in Figure 3 indicate that a physical disability creates transportation problems for 10 percent of the respondents. These respondents indicated that someone in the household required assistance with their transportation.

The prevalence of households with special transportation needs resulting from physical disabilities is higher among the following demographic subgroups:

- More households in the Barstow area (21 percent) have someone in the household with a physical disability that requires assistance with their transportation.
- Similarly, households requiring assistance with transportation as a result of a physical disability are more often 65 or older (18 percent) and receive Medi-Cal and Medicare (20 percent) or receive just Medicare (18 percent).
- Four percent of the households that have someone with a physical disability depend on public transportation as their mode of travel to their treatments, test, and appointments.

5.3 CONCLUSIONS

The survey findings suggested the following conclusions:

- Problems with transportation lead to a significant number of missed or rescheduled medical treatments, tests, and appointments. Five percent of the households missed or rescheduled an appointment within the past 12 months because of difficulties with their transportation.

- Consistent with the California driving culture, most of the respondents (84 percent) drive themselves to their scheduled medical treatments, tests, or appointments in their own vehicle. Transportation provided by friends or family members account for 7 percent of the households. Five percent of the households use public transportation as their mode of travel to their medical treatments, tests or appointments. Consequently, over half (56 percent) of the missed or rescheduled appointments occur in households with their own vehicles. Fifteen percent of the missed or rescheduled appointments resulting from problems with transportation occurred with public transit dependent households. Another 20 percent of the missed or rescheduled appointments resulting from problems with transportation occur in households where a friend or family member provided the transportation.

- Dependence on transportation from others for health care needs, whether that means public transportation or a friend or family member, leaves households more vulnerable to transportation difficulties. More of these transportation dependent households missed or rescheduled health care commitments because of problems with transportation. However, this group represents a very small percentage of the total population. Transit dependent households that missed or rescheduled a medical treatment, test, or appointment because of problems with their transportation comprise 1 percent of the total population in the study area. Likewise, only 1 percent of the households that depends on family or friends for their health care transportation missed or rescheduled an appointment because of problems with their transportation.

- Those who use public transportation to travel to their medical treatments more typically have the following demographic characteristics: women, 25 to 34 years of age, household incomes of less than $20,000 a year, Medi-Cal recipients, and Spanish speakers. These same demographic attributes characterize respondents who most frequently missed or rescheduled their health care treatments because of problems with their transportation.

- The respondents' geographic location has virtually no bearing on whether or not a household missed or rescheduled an appointment because of transportation problems. Given the size of the area, this presents a significant hurdle in designing an effective public transportation solution to address a very small percentage of the population spread over a large geographic area. Rather than a generalized solution of expanded bus routes or more frequent bus service, a more effective approach might involve an alternate solution giving these transportation dependent households the option to schedule transportation for their medical treatments, tests, and appointments.

6. CONSUMER AND STAKEHOLDER OUTREACH EFFORT

The qualitative elements of the study involved outreach, interviews and discussions with a cross-section of agencies, groups and individuals within the healthcare and transit arenas knowledgeable about issues related to access to NEMT in the Inland Empire, specifically focused on lower income and senior populations. In an effort to obtain input and perspectives from the community, the project team conducted a significant outreach effort to ensure that informed and interested stakeholders were involved in the process, and that their input was documented.

6.1 HEALTHCARE CONSUMER AND OPINION LEADER FOCUS GROUPS

In an effort to obtain and document input from consumers and healthcare opinion leaders on issues relative to non-emergency medical trip needs in the study area the project team proposed to conduct focus groups in the five geographic study areas. To assist in this effort the project team requested that PMT healthcare members provide healthcare member contacts that would be used to elicit participation in group discussion sessions. HIPAA requirements precluded disclosure of member information, thereby restricting access to PMT healthcare members.

Although various alternatives to recruitment of interested consumers were discussed, it was agreed that PMT healthcare organizations would either work to coordinate internal efforts to allow the project team to meet with existing healthcare organizations' consumer groups during regularly scheduled meetings, or would provide the team with referrals to other individuals involved with healthcare within the community who may be willing to offer their input.

Discussion topics (Appendix E) were developed and approved by the PMT for use by the project team in consumer or opinion leader settings, covering the following general areas:

- Awareness and understanding of NEMT issues facing healthcare providers and consumers
- Perceived impacts to persons seeking healthcare and service provider organizations and institutions
- Accessing transportation options
- Recommended solutions and/or alternative approaches to addressing NEMT

Inland Empire Health Plan elected to arrange for project team participation in the regularly scheduled meetings of two IEHP sponsored groups:

- Public Policy Participation Committee (PPPC) – November 19, 2003
- Persons with Disabilities Workgroup – December 12, 2003

Other PMT healthcare organizations provided the project team with referrals of individuals to contact to solicit their input to the study. Members of the project team did meet with the IEHP Persons With Disabilities Workgroup, however, the audio tape was inaudible. Likewise notes taken at the meeting were insufficient to discuss the groups' perspectives in detail in this document. However, highlights from responses to questions arising from the IEHP PPPC group discussions are presented below.

6.1.1 Public Policy Participation Committee (PPPC) Meeting

The project team sought to assess:

- The Committee's general awareness of transportation travel options in their communities;
- Whether they faced difficulties getting to medical appointments due to lack of transportation;
- Current methods used to get medical appointments;
- Barriers to using public transportation
- Suggestions for improvement

Highlights of the group discussion are, as follows:

- Several individuals confirmed that they had taken public transportation to their medical appointments.
- Only one individual indicated that his physician arranged for a medical transportation service to transport him to his medical appointments, which is the easiest form of transportation he uses. Coupled with this option he also uses Dial-A-Ride, although he cited problems with scheduling and "bumping" people from receiving service if they did not have a disability.
- One person indicated that although they use Omnitrans to get to their appointments, the main drawback is that the buses stop running at a certain time and that can be inconvenient.
- Omnitrans recently raised the price of bus fares and created a Day Pass which is more costly than two bus fares to my destination and two bus fares on the return trip. If you are traveling between San Bernardino and Riverside counties, you have to buy Day Passes from both operators. This can be costly.
- Several people indicated that the bus is inconvenient if you are traveling with children or have a long distance to travel. In addition, wait times when transferring can be lengthy. Trips on public transit can take up to 2 hours.
- Bus stop amenities primarily lack of shelters against the whether was cited as a major deterrent to using the bus.
- The Partnership to Preserve Independent Living was identified as a valuable community organization that uses volunteers to take individuals where no transit service exists, or when an individual is too frail, ill or unable to use public transit.
- Committee members indicated that they had cancelled medical appointments for basically two reasons: no transportation and poor weather conditions. Bus stops may be conveniently located to your house, but the bus is not always easy to use when ill children are involved.
- One individual indicated that at an Ontario medical office, medical transportation is arranged by the physician if a patient calls in to cancel an appointment due to lack of transportation.
- It was the general response of the Committee that when canceling a medical appointment, they are not asked the reason why. Some indicated that appointments are typically cancelled using an automated attendant. In some circumstances a live person is never spoken to.
- On individual suggested that transportation funding be provided directly to medical groups, healthcare agencies and organizations to operate transportation for their members.
- Low income families need reasonable fares to encourage transit use.
- Another individual commented that as long as the public transit system has value to the targeted audience it has worth. He indicated that income really doesn't matter because if the system works for you then you will use it.

- Some group members indicated that safety and security while taking transit is an issue.

- Several Committee members said that they would be willing to pay for door-to-door service. Some indicated a willingness to pay from $3 to $10 per trip depending upon the destination.

6.2 STAKEHOLDER QUESTIONNAIRE

To gather additional qualitative input to study, the project team supplemented by the PMT, and other sources, compiled a comprehensive list of community leaders, funding agencies, and public and private transportation providers knowledgeable about NEMT transportation needs (Appendix F). The contact list included over seventy (70) healthcare and transportation professionals representing in excess of fifty (50) organizations and agencies in Riverside and San Bernardino counties.

Utilizing the contact list, JNTC conducted outreach efforts to solicit participation. Each person was contacted via telephone and was introduced to the study purpose and objectives, and to encourage participation, was asked their preference for participating in a roundtable session or completing a questionnaire. Numerous repeat telephone calls were made by the project team over a period of six weeks to obtain participation. A total of twenty (20) individuals indicated their interest in participation, with only three (3) expressing an interest in participating in a roundtable session.

A stakeholder questionnaire (Appendix G) was developed by the project team and distributed along with completion and return instructions via electronic mail to those who agreed to complete the questionnaire. In addition, those who preferred the roundtable were also asked to complete a questionnaire.

The topics and corresponding questions posed to healthcare and transportation stakeholders were designed to determine their perspectives and experiences within their communities relative to understanding the need for non-emergency medical transportation. Specifically, the project team sought to assess the following:

- Whether they believe that consumers have difficulty trying to get to their medical appointments;

- Their direct or indirect experiences with individuals and/or families having difficulty accessing their medical appointments for lack of transportation, and perceived impacts to their organization;

- Identifying individual or situational experiences with consumers having difficulty accessing their medical appointments for lack of transportation;

- Whether their organization or agency operates non-emergency medical transportation, or awareness of other NEMT programs;

- Their opinions relative to the barriers to providing NEMT services to consumers; and

- Their recommendations on methods to improve access to and availability of NEMT services in the community.

To date, despite consistent and repeated outreach and communication, only thirteen (13) questionnaires were returned. To ensure an "all inclusive" outreach effort, the project team continued to solicit input from stakeholders through the end of August 2004. Questionnaires were completed by the following healthcare and public transportation representatives:

1. Debby Lara-Toney - First 5 Riverside Children and Families Commission
2. Linda Angona - First 5 San Bernardino Children and Families Commission
3. Colleen O'Neill – Redlands Community Hospital
4. Kimberly Prokopij – Community Adult Day Care of San Bernardino
5. James Michael Yates – Department of Rehabilitation
6. Judy Purdey - Asistencia Villa Rehabilitation & Care Center
7. Dora Barilla – Community Health Educator
8. Brian MacGavin - Riverside County EMS Agency
9. Richard Smith – Partnership of Preserve Independent Living
10. Kevin Kane – Victor Valley Transit Authority
11. Michelle Cox – Omnitrans
12. Chris Millen – City of Banning
13. Gary Melton – Inland Empire Health Plan

The respondents to the questionnaire represent a cross-section of healthcare organizations and agencies, community healthcare programs and transit operators. Almost all stakeholders completing the survey encountered either directly or indirectly, clients/patients experiencing difficulty in making medical appointments due to issues with transportation.

A summary of the actual responses received from each of the respondents to the stakeholders' questionnaire are presented in Appendix H. In addition a summary of the issues and major themes arising from stakeholder responses are discussed below.

6.2.1 Stakeholder Major Issues and Themes

- **All but one respondent to the questionnaire indicated that they encounter (directly or indirectly) individuals and families seeking access to non-emergency medical transportation services,** including:

  - Families with young children
  - Persons with mental and physical handicaps; unable to access public transit because of disability
  - Individuals with chronic illnesses
  - Individuals undergoing rehabilitation
  - Nursing home patients
  - Persons needing routine check-ups and follow-on medical appointments

- **All but one stakeholder responded in affirmative that patients/clients are having difficulty making appointments.** The respondents indicate that they have direct and indirect knowledge about this issue as communicated through direct patient/client communication service contractors who serve the public. Stakeholders indicated that many patients/clients would not be able to receive treatment if they had to provide their own transportation. Primary reasons why people have difficulty arranging their own transportation options:

  - Physical, as well as, mental problems restrict the use of the bus
  - Inability to pay for transportation

- Geography is a problem in certain areas of the Inland Empire (Lucerne Valley, Barstow, Big Bear, Daggett and Pinon Hills)—limited or no transportation service in these remote/rural areas

- **Some stakeholders believe that either we finance transportation services or face cancelled medical appointments.** Healthcare organizations must fund transportation for their patients/clients, or else.

- **The majority of respondents indicate that they do not refer their patients/clients to public transit.**

- **A number of organizations directly operate or contract for medical transportation.** However, those who responded only serve persons with disabilities.

- **The greatest barrier to direct provision of transportation for clients/patients** is the lack of financial resources to fund operating costs and maintain equipment. Another major barrier mentioned as a deterrent to service provision is that coverage areas and the corresponding service needed is too widespread to handle effectively.

- **Two definitions exist of NEMT populations.** Healthcare industry focuses upon seniors and disabled; Transit views the universe as broader.

- **All respondents indicated that they believe there is a lack of transportation options available for those needing to get to medical appointments.** However, one transit operator indicated that the role of transit is underestimated, and another indicated that the options are limited regionally, not necessarily locally.

6.3 INTERVIEWS WITH HEALTHCARE ORGANIZATION REPRESENTATIVES

In a further effort to augment and gain insights into the perspectives of healthcare professionals concerning non-emergency medical transportation issues, the project team conducted interviews with representatives from the following organizations:

- San Bernardino County Department of Public Health
  - Eric Frykman, M.D., Health Officer/Director of Public Health, San Bernardino County

- Redlands Community Hospital
  - Director of Social Services,
  - Director of Case Management and Discharge Planning
  - Director of Behavioral Health
  - Emergency Room nursing supervisor.

Although the project team continues to seek input from major healthcare agency and organization representatives in both counties on the subject of NEMT, to date, only the two agencies/organizations mentioned above have agreed to participate in the process. A summary of their insights and perspectives are summarized below.

6.3.1 San Bernardino County Department of Public Health

San Bernardino County's public health departments provide a range of services that are often, but not always, home-based and delivered to the consumer at home in order to protect public health. San Bernardino County's public health officer, Dr. Eric Frykman's comments and responses follow.

- Mr. Frykman characterizes non-emergency medical transportation as a "massive problem for a small number of individuals."

- Dr. Frykman sees as a parallel to the NEMT issue the public health services to tuberculosis patients. This is a resource intensive and inefficient use of services, whereby the public health nursing staff are required to bring medicine on a daily, or every other day basis, and stay to observe that the patient takes the medication. Such supervised medicating is appropriate for those individuals who cannot, for a variety of reasons, self-treat, but for whom the public health is protected if their disease is under control.

- The Dept. of Public Health does view transportation as a barrier to medical access and can on limited occasions provide bus pass/ bus vouchers to patients, particularly those attending the HIV clinics and those in the maternal and child health programs. Information on the volume of such purchases is not readily available, but Dr. Frykman anticipates it will be of increased focus during FY 05 due to the anecdotal reports of continuing transportation needs.

- Transportation access is not a straightforward issue as evidenced in the Dept.'s recent experiences with a new clinic in Redlands. Locating a clinic near the neighborhoods where the target population lived, public health officials anticipated that prospective patients could walk or take the bus to a neighborhood clinic. Consideration of Omnitrans bus routing was part of a decision to locate the clinic at Lagonia and Church, in Redlands. What was not initially anticipated were the transportation issues that still presented themselves when patients served by the neighborhood clinic required services, treatments or testing at regional health facilities for health care not provided at the local clinic.

- Dr. Frykman views transportation and public health as part of larger systems issue related to health care access. Individual factors that can be characterized as the "culture of poverty" make it easy to label transportation as the reason why people do not get health services. For example, individuals' perception as to what is available influences what they will attempt. If they perceive the bus stop or bus routing to be too far away, they may not attempt to utilize it. Similarly, if the individual is not motivated to independently access services, they may perceive that the inconvenience of public transportation exceeds the benefit of getting the health service.

- Informational solutions are probably helpful, Dr. Frykman anticipates, as simple as ensuring that all public health nurses routinely receive updates of the Omnitrans bus book and other public transit operators. Regional mapping of routes to and from major health care facilities is desirable, but complicated by the fact that individuals come from such a range of possible directions. Some focus exclusively on health care destinations, in relation to available routing options, might be of value.

6.3.2 Redlands Community Hospital

RCH Conversation Participants

A group of staff members of Redlands Community Hospital (RCH) knowledgeable in various aspects of the non-emergency medical transportation problem was convened by the hospital's Managed Care Director. Participants included the Manager of Social Services, Case Management and Discharge Planning, Manager of Behavioral Health and an Emergency Room nursing supervisor. These individuals met with study representatives, SANBAG's project officer and UCLA's Center for Health Policy Research, to discuss NEMT-related issues for about 90 minutes.

Transportation Needs Present Themselves for a Mix of Persons and Circumstances

Persons needing transportation that could be characterized as in need of non-emergency medical transportation reflect both a breadth of needs but also a defined set of needs. These include:

- ***New mothers with babies in the neonatal intensive care unit (NICU)***. Sometimes these moms are in residence at the Ronald McDonald House, near Loma Linda University Medical Center, newly delivered moms who should not be driving themselves and sometimes have no family member near. Moms who are living at home but whose babies are in the NICU for four to twelve weeks may have limited access to a car and must travel to the hospital by alternative means.
- ***New mothers in Birth and Beyond classes***. Some new moms do not have access to a car and may not easily get back to the hospital for post-partum care, either for themselves or their babies. Use of public transportation can seem too difficult for these new moms.
- ***Ronald McDonald House residents***. These are family members of young patients who are likely to have traveled here from elsewhere, hence are staying at the Ronald McDonald House. They often need assistance to travel between their lodging and their hospitalized child. The Ronald MacDonald House is 3 miles distant from Redlands Community Hospital, on Barton Road and Anderson.
- ***Seniors who cannot drive to the hospital.*** The average age of 75 years defines Redlands Community Hospital's 3000 monthly emergency room patients. The hospital sees a predominately elderly patient population because of the older ages of its base communities (Redlands and Yucaipa, Banning and Beaumont). Staff estimate that 4 out of every 10 ambulance visits to the E.R. are non-emergency trips that could have been made by other than an ambulance. Some individuals are isolated, frail elders who have no community support system and a limited sense of how to tap into services. For them, the hospital is front-line health care delivery. For other seniors, either they or their spouse are no longer comfortable driving and see an ambulance as the safest, most practical transport to the hospital for an immediate health situation.
- ***Emergency room patients who arrived by ambulance.*** As with seniors who arrive by ambulance, all patients arriving by ambulance will need some form of transportation home, upon discharge. This includes nursing home patients for whom an ambulance is requested with a 911 call but who will then need transportation back to the skilled nursing facility after treatments. When transportation cannot be immediately arranged, the patient remains in the E.R. bed, prohibiting others from using the bed and delaying care for waiting patients.

- ***Patients who drove to the E.R. but cannot drive home***. Where pain or other narcotic medication is administered, the patient must have an alternative ride home if they drove themselves to the hospital. E.R. nurses ensure that such patients do have another means of transportation home before they will administer medication that could impair driving. When an elderly couple drive themselves to the E.R., often the attending spouse must return home (for medication or to feed pets) before the ill spouse is ready to leave. When the patient is discharged after dark, the elderly at-home spouse is sometimes unable to return to the hospital given a self or physician-prescribed limitation on driving after sunset.

- ***In-patients with no transportation home upon discharge.*** These individuals can be of various ages upon discharge from the hospital, but are typically adults or older adults. Redlands Community Hospital is the hospital of choice for mountains' patients brought in from the Big Bear area; such individuals may not have a way to get home at the time of discharge. Other patients may have driven themselves in but be unable to drive home. As with ER patients without transportation, these individuals are held in their hospital bed, taking up that space, until transportation can be arranged.

- ***Patients receiving same-day treatments but unable to drive in or home***. Same-day patients receive routine treatments or tests but sometimes are unable to arrange their ride to or from the hospital. In some instances they may not feel well enough to navigate the public transit system after tests or treatments.

- ***Outlying clinic patients who must have hospital-based treatments***. RCH set up three primary care clinics in outlying areas to serve uninsured families closer to their residence because transportation was sometimes an issue. Where certain tests or treatments are required and not provided at these clinics, these persons can have difficulty getting between their homes and RCH where the tests are done.

These are some of the typical circumstances that create transportation-related challenges for RCH staff on a regular basis.

<u>RCH Referrals of Existing Public Transportation Services</u>

RCH case management staff is quite familiar with local public transit routes, including Omnitrans, Banning and Beaumont services. Information sources, including web sites and bus books are routinely used and valued but some of the following barriers to public transit have arisen for RCH staff promoting use of fixed-route transit:

- ***Access to current fixed-route information***. Where current bus information is available on-line, or a current ride guide in hand at the time when transportation arrangements are being developed, then available service can be readily identified. There have been some problems with outdated information provided to discharged patients. Also, assisting those whose trips involve transfers is sometimes beyond the capabilities of RCH staff.

- ***The returned bus bench of value***. To encourage patient and discharged patient use of public transit, it has been most helpful to have the bus stop with a bench returned (it was relocated at one point). The potential for a shelter, particularly for weaker, newly discharged individual and mothers with babies, is desirable.

- ***Bi-directional service needed.*** Redlands Trolley Blue Line currently serves RCH, traveling in a loop past the hospital. Riders are well served by destinations to the east of the hospital but cannot easily get to those to the west, such as Ronald McDonald House and Loma Linda University Medical Center. The people traveling west must either walk to Barton Road (0.5 miles) or travel downtown to transfer, adding an additional 30 to 45 minute loop to an otherwise five (5) minute bus trip.

- ***Low income patients***. There is difficulty affording even a basic bus fare for some patients, including those moms and children enrolled in the Healthy Start program. RCH attempted to deal with this by establishing three outlying out-patient clinics, nearer to residences in North Redlands, Mentone and Yucaipa. However, some tests and treatments remain hospital-based and require a trip to RCH, despite efforts to move the bulk of out-patient care out to the home community.

- ***ADA Access Eligibility and Certification.*** The RCH Behavioral Health group has worked with Omnitrans to provide on-site ADA application opportunities. Such coordination is of little value to those E.R. elderly patients who are potential ADA users but never get into the system because of their own isolation and lack of connection to community-based services.

RCH Resources for Transportation

Redlands Community Hospital addresses patient population transportation needs in three ways:

1) By use of case management information and assistance to link patients with available services;

2) Through operation of two, and soon to be three vehicles as a component of its partial-day hospitalization program for behavioral health patients; and

3) With expenditure of hospital funds for the purchase of contracted or vendored transportation.

1. RCH Case Management Function -- RCH case management staff are clearly well informed about local public transit, knowledgeable in the routing and timing of available services, as well as the limits of those. They also see clearly that the instances are too-frequent where non-emergency medical transportation is needed and there is no appropriate, affordable resource available.

2. RCH Transportation Service -- Operating its own transportation service, RCH operates three vehicles including two 5310-funded vehicles. It was awarded an additional vehicle, as a service expansion vehicle, in the FY 2004/2005 Section 5310 Grant cycle. The hospital's proposal was a strong score in the high 80s on the statewide scoring of up to 100 points per application. Coordination is extensive, both with the local transportation planning processes (PASTACC) and within the community by providing trips to RCH and for a local nursing home when the behavioral program does not require the vehicles. RCH behavioral program currently expends an estimated $110,000 annually, of which 55% comes from RCH Community Foundation, 27% from third party reimbursements and 19% from passenger fares. With the new vehicle, the program will provide an estimated 20,000 one-way passenger trips per year, or almost 80 per day at a total cost of about $5.50 per one-way trip.

3. RCH Purchase of Transportation Services -- Staff report that the Case Management department has spent $10,736 for non-emergency medical transportation over the past twelve months, on RCH-ordered transportation, services paid for from a discretionary/ Charity Care line item and for which no third-party reimbursement is anticipated. An additional $3,000 has been spent on taxi trips during this time as well. Three types of transportation services are purchased, in addition to the services provided by the behavioral health program vans. These include:

> Taxi trip – averaging $30 per trip for ambulatory passenger
> Contracted van – averaging $50 per trip for wheel chair passenger
> Contracted gurney van – averaging $140 for gurney passenger

NEMT Issues for Further Consideration

While the problem of non-emergency medical transportation remains difficult to quantify, it clearly presents itself with frequency and regularity to this group of individuals. RCH has developed its internal capability of responding, both with its own transportation services and with modest expenditures from its Discretionary/ Charity Care and RCH Community Foundation funds.

Appropriate Role for Hospitals in Transportation -- Hospital administrators remain ambivalent about the type and extent of transportation they should be providing. Even this modest expansion of the behavioral health transportation service, with the newest Section 5310 vehicle grant, raised concerns that "the hospital is getting into the transportation business." And yet, the per trip costs of services it provides are significantly less than those purchased on behalf of RCH patients from private vendors. Clearly there is a cost argument for maintaining some type of hospital-based transportation, even as the appropriateness of the hospital's role as transportation provider is debated.

Coordination with Public Transportation – RCH staff were pleasantly surprised to see the bench replaced outside the hospital when they requested it of Omnitrans staff. Other than maintaining website access, there is no formal communication between the planning staff of the area providers and RCH. There may be an outreach role for Omnitrans, Banning and Beaumont to develop to ensure that current public transit information and resources are always in the hands of the discharge planning staff. There may be other support functions in the areas of training, risk-management or even maintenance by which the public transit providers can support hospital-based transportation.

Interagency Coordination -- In SANBAG's letter of support for the RCH Section 5310 vehicle grant, it was noted:

> RCH has established the classic [transportation] coordination model, working with three other organizations while supporting its own patient transportation requirements. The complexities of these are not insignificant and yet RCH has established a sufficiently stable program to plan now for its expansion, in anticipation of the growing proportion of seniors in the communities it serves.[1]

[1] Correspondence to Ms. L. Dutton, March 2, 2004 from San Bernardino Associated Governments, Heather Menninger-Mayeda signing for Michael A. Bair, Director Rail and Transit Programming.

The RCH behavioral health program, as a base for the transportation service, is providing some non-emergency medical transportation for the hospital, as well as serving patients who need to travel between the Beaver Medical Clinic and a local skilled nursing facility but do not have transportation. RCH administrators express concern about providing transportation services much beyond what they are currently doing as these trips are all definably within the RCH sphere-of-influence.

Isolated, Frail Elderly and Transportation -- A larger public policy issue was surfaced by staff in that the hospital is often the front-line receiving agent for those chronically ill seniors whose personal support system is either exhausted or non-existent. For these very isolated individuals, community resources such as ADA transportation services either require more independence or greater health than these individuals have. How to identify and provide services to these persons goes beyond the problem of transportation but it may be in relation to transportation that their degree of isolation becomes apparent.

7.0 HEALTHCARE TRANSPORTATION SERVICES INVENTORY

For the purpose of gaining a broad-based understanding of the current environment relative to the options available for those needing transportation to medical appointments, the project team undertook an inventory and review of local transportation services operated by healthcare organizations, social service agencies, and public transportation providers in the study area. Although the amount of available information on local medical and social service transportation varies by area and program, this was undertaken to determine the level of transportation currently operated by these agencies, organizations, and operators and to assess the degree of access to and availability of available transportation options. The project team's review ultimately focused on those services that are operated, and/or could potentially be used for non-emergency transportation to and from medical and other health care facilities in the five study areas of the Inland Empire. The medical and social service transportation resource inventory included a review of:

- Program Clientele -- Eligibility criteria for using the transportation service
- Organizational Structure -- For determining eligibility, reservations, scheduling and dispatching of service and the actual on-street operation of transportation services
- Service Characteristics – Days and hours of operation, advance reservation requirements, and service area
- Size of Program – Annual passengers, fleet size and annual operating budget for transportation service
- Program Funding – Sources of funding and the annual amount received for non-emergency transportation service.

In an effort to correlate the transportation service areas of our review with the previously established five geographic study areas (i.e. Banning/Beaumont, Jurupa, etc) we found that there is some overlap in transportation service areas, for example, some services operate in both San Bernardino and Riverside counties, providing transportation coverage to one or more of the established geographic study areas. Therefore for the sake of clarification, the project team classified transportation services operated in both counties as "Inland Empire".

As an adjunct to reviewing local medical and social service transportation services, the project team worked to identify and present existing NEMT programs operating throughout the country. The information obtained from these NEMT program models provided the project team with a "snapshot" of best practices (e.g. program innovations and strengths, barriers and weakness, etc.) and provides us with a more concrete basis to develop NEMT programmatic recommendations for the Inland Empire. An overview of these programs is presented in Section 8.0 below.

As a final step to completing the "profile" of transportation services in the two counties, the project team collected data and information on services currently operated by public transit operators in the study area. This information is detailed in Section 10 below.

7.1 HEALTHCARE TRANSPORTATION SERVICES: INVENTORY AND OVERVIEW

7.1.1 Overview: Transportation Services Operated by Medical and Social Service Agencies

The review conducted by the project team showed that a number of non-profit agencies and for-profit HMO's and hospital systems operate non-emergency medical transportation services. These programs are each administered separately, and efforts are oftentimes duplicated and there is significant overlap in transportation service areas and customer base. Each program is naturally focused upon its own primary healthcare or social service mission, thus provision of transportation services including non-emergency medical, although a necessary program support element, is often a secondary concern.

In an effort to improve coordination of these various transportation programs, the State of California requires inventories of social service transportation services under AB 120/SB 826. Information from the most recent AB 120/SB 826 Survey of transportation programs in both San Bernardino and Riverside counties was reviewed by the project team to identify agencies and organizations in the healthcare or social service industry providing medical trips to clients in one or more of the five study areas.

Information on local medical transportation services operated in the study area was also obtained from Inland Empire Health Plan. Although all PMT healthcare organizations were expected to provide this information, only IEHP completed the Transportation Services Interview Guide (Appendix I) developed by the project team.

The project team compiled a listing of fifty-two (52) agencies and organizations in the health care or social service industry that operate or subsidize transportation services for medical trips. Agencies and organizations providing information cumulatively report $2.1 million in annual expenditures for transportation services and 0.7 million annual passenger trips. A fleet of over ninety (91) vehicles are used for transportation purposes and service is generally limited to "program-related" clientele. Summary highlights of NEMT transportation operated by healthcare and social service organizations, by geographic area is presented below.

7.1.2 Inland Empire

Table 7-1a identifies seven organizations providing healthcare services throughout the Inland Empire.

Table 7-1a
MEDICAL & SOCIAL SERVICE AGENCIES
SERVING THE MOST OF THE INLAND EMPIRE AREA

Organizations Providing Service Thoroughout the Inland Empire	Service Industry	Transp Provided	Transp Types	# Vehicles	Annual Budget	Annual One-Way Trips	Cost Per Trip
Community Health Systems, Inc	Health Care	No	None	-	-	-	-
Healthcare Association of Southern California	Health Care	No	None	-	-	-	-
HealthNet	Health Care	No	None	-	-	-	-
Inland AIDS Project	Health Care	Yes	Direct	4	-	13,800	-
Inland Empire Health Plan	Health Care	Yes	Contract and Subsidy	-	$ 90,000	3,056	$ 29.45
Molina Healthcare of California	Health Care	No	None	-	-	-	-
Sierra Vista	Health Care	Yes	Direct	2	-	-	-

Summary of Review

- Three of the seven organizations provide NEMT transportation services
- Both the Inland AIDS Project and Sierra Vista organizations directly operate their own service, reporting a total of six vehicles in service
- Drivers are paid full and part-time employees of these organizations
- The Inland AIDS Project limits service to persons with the HIV virus or AIDS
- Sierra Vista limits service clients of its mental health in-patient treatment program

The Inland Empire Health Plan (IEHP) a member of the study PMT also operates NEMT transportation through contracts with private taxicab companies for the operation of service. Services are limited to Medi-Cal health plan members. In addition, IEHP also provides bus passes to clients who indicate that they have no other means of transportation to obtain health care. Table 7-1b below provides a general overview of the IEHP transportation program.

Table 7-1b
IEHP TRANSPORTATION PROGRAM

CHARACTERISTICS	DESCRIPTION
Program Clientele & Eligibility	Clients indicating that they have no means of transportation health care facilities are eligible for transportation service. All Medi-Cal members are eligible for transportation assistance subject to verification of need. Members requiring transportation service are typically on Medi-Cal and participating in specialty clinics such as weight management, dialysis, pain management, and physical therapy. IEHP has over 149,000 members.
Organizational Structure	IEHP Case Managers and Coordinators determine eligibility. Reservations hours are weekdays from 8:00 a.m. to 5:00 p.m. with one-day advance notice required for taxicabs and one week for buses and vans. Private contractors are responsible for dispatch and scheduling, as well as operations. Contractors are reimbursed based on an invoice
Service Area	Transportation service is available in San Bernardino and Riverside Counties with the exception of Blythe, Desert Center, Earp, Parker Dam, Vidal, Cima, Essex, Needles, Nipton, Mountain Pass, Red Mountain, and Trona.
Days and Hours of Service	Days and hours of service are established by service providers, but generally coincide with normal business hours (i.e., weekdays from 7:30 a.m. to 6:30 p.m.).
Size of Program	IEHP has an annual operating budget of $30,000 for transportation services but estimates that three times this amount is actually spent to provide an estimated 3,056 one-way passenger trips annually. The private taxi companies providing service under contract to IEHP own vehicles.
Program Funding	Transportation funds come from Federal/State Medicaid funding capitation amounts.

7.1.3 San Bernardino County

Table 7-1c identifies seven organizations providing healthcare services throughout San Bernardino County.

Table 7-1c
MEDICAL & SOCIAL SERVICE AGENCIES SERVING MOST OF THE SAN BERNARDINO COUNTY AREA

Organizations Providing Service Thoroughout the San Bernardino County	Service Industry	Transp Provided	Transp Types	# Vehicles	Annual Budget	Annual One-Way Trips	Cost Per Trip
Arrowhead Regional Medical Center	Health Care	No	Subsidy	-	-	-	-
California Child Services, San Bernardino Public Health Department	Health Care	No	Subsidy	-	-	-	-
DAAS Administration -- San Bernardino	Health Care	Yes	Contract + Subsidy	2	-	-	-
Jerry L. Pettis Memorial VA Medical Center	Health Care	Yes	Direct, Contract, + Subsidy	12	$1,260,000	504,000	$ 2.50
San Bernardino County Department of Public & Maternal Health Services	Health Care	No	Subsidy	-	-	-	-
San Bernardino County Department of Public Health -- Health Services	Health Care	No	Subsidy	-	-	-	-
San Bernardino County, Public Health Department -- Health Services & Transp Group	Health Care	Yes	Subsidy	-	-	-	-
Victory Outreach	Religious	Yes	Direct	-	-	-	-
Fontana Garden	Residential	Yes	Direct + Subsidy	3	-	-	-
Orchid Court	Residential	Yes	Direct + Contract	2	-	-	-
American Cancer Society	Social Service	Yes	Direct + Subsidy	-	-	-	-

Summary of Review

- Three of the seven of healthcare organizations in the area provide NEMT transportation services to clients
- Three other social service/other organizations also operate transportation services
- Organizations either directly operates service or contracts with private transportation companies
- There is a total of nineteen vehicles reportedly in operation
- Although they do not all operate transportation services, all seven of the healthcare organizations make some form of subsidized transit pass available to clients
- Transportation services provided by almost all of the organizations are limited in size or destinations served and are available to a small segment of the population (e.g., services provided by DAAS are to a nutrition site (total membership in three of the four non-health care industry organizations is less than 150)
- The Jerry Pettis VA Medical Center a larger-scale operation has over 500 clients. Transportation services are available to American Veterans on weekdays from 4:00 a.m. to 7:00 p.m. This organization has seven full-time drivers and 25 part-time drivers, with three supervisors. And while this organization is based in San Bernardino County,

transportation services to veterans and facilities in Riverside County are also available. The 12 vehicles used in this service are funded in part with Federal Section 5310 transportation funding.

7.1.4 San Bernardino Urban Area

Table 7-1d identifies nine organizations providing healthcare services in primarily in the San Bernardino Urban Area.

Table 7-1d
MEDICAL & SOCIAL SERVICE AGENCIES
SERVING THE SAN BERNARDINO VALLEY AREA

Organizations Providing Service In the San Bernardino Valley Area	Service Industry	Transp Provided	Transp Types	# Vehicles	Annual Budget	Annual One-Way Trips	Cost Per Trip
Casa De San Bernardino	Health Care	No	None	-	-	-	-
Cedar House and Cedar House Outpatient	Residential	Yes	Direct	3	-	-	-
Central City Lutheran Mission	Residential	Yes	Direct + Subsidy	1	-	-	-
Children's Fund	Social Service	No	Subsidy	-	-	-	-
Community Hospital of San Bernardino	Health Care	Yes	Direct + Subsidy	5	$ 305,860	33,156	$ 9.22
DAAS Senior Info and Assistance -- Fontana	Social Service	No	None	-	-	-	-
DAAS Senior Info and Assistance -- San Bernardino	Social Service	No	None	-	-	-	-
Discovery Treatment	Health Care	Yes	Contract	2	-	-	-
Hase and Associates	Health Care	No	None	-	-	-	-
Highland Senior Center	Social Service	Yes	Direct + Subsidy	2	$ 39,100	3,900	$ 10.03
Inland Empire Job Corps	Education	Yes	Contract + Subsidy	18	$ 300,360	1,200	$ 250.30
Jessie Turner Senior & Community Center	Social Service	Yes	Direct	3	-	-	-
Josephine Knopf Senior Center	Social Service	Yes	Contract	3	-	-	-
Kaiser Permanente -- Fontana	Health Care	No	None	-	-	-	-
Leisure Pointe	Residential	Yes	Direct	2	-	-	-
Loma Linda Medical Center Adult Day Services & Transportation	Day Care	Yes	Direct + Subsidy	2	$ 49,500	6,000	$ 8.25
Merrill Community Services Incorporation	Health Care	No	None	-	-	-	-
New House -- Women & Children Recovery Progam	Residential	Yes	Direct + Subsidy	1	$ -	-	$ -
People's Choice	Health Care	Yes	Direct + Subsidy	-	-	-	-
Redlands Community Hospital	Health Care	Yes	Direct	3	$ 109,770	11,280	$ 9.73
Salvation Army	Residential	Yes	Direct	4	-	41,736	-
San Bernardino Valley Dialysis Center	Health Care	No	None	-	-	-	-

Summary of Review

- Two of the organizations provide transportation service outside of the San Bernardino Valley area. These include Redlands Community Hospital, which also serves the Pass Area, and Inland Empire Job Corps, which serves a 60-mile radius around the City of San Bernardino and therefore also includes the Jurupa Area.

- A number of the organizations shown provide service to a portion of the San Bernardino Urban Area.

- Four of the nine healthcare organizations shown to provide NEMT transportation services are healthcare providers. Three of these are hospitals and medical centers (i.e., Redlands Community Hospital, Community Hospital of San Bernardino, and Loma Linda Medical Center) These three healthcare organizations focus on providing many-to-one (or sometimes two) transportation services

- Community Hospital, Loma Linda and People's Choice also provide some form of subsidized transit support to eligible members

- The fourth health care organization, People's Choice, is a community-based health services agency that provides service to six separate sites

- Each of the healthcare organizations providing NEMT employs full and/or part-time drivers and owns their vehicles. Vehicles used by Redlands Community Hospital include those purchased with Federal Section 5310 transportation funds.

- Ten of the social service/other organizations provide NEMT transportation services. Five of these organizations also provide some of subsidized transit pass to clients.

- People's Choice is distinct in that it uses volunteers to provide transportation service

- In general, residential facilities, senior centers, and organizations with religious affiliations tend to provide transportation services that are comprehensive relative to the unmet transportation needs of their specific client base. For example, The Highland Senior Center provides trips to medical appointments, grocery shopping and pharmacy, in addition to trips to the Senior Center itself.

- The total number of social service/other organizations versus healthcare organizations operating transportation services in this area is higher by comparison

- The Inland Empire Job Corps organization is noteworthy not only for the area covered (i.e., 60-mile radius of San Bernardino) but also in the number of locations served (i.e., 26 sites) and the size of its transportation program. This organization provides some service directly, contracts for additional service, and also subsidizes transit passes. A total of 18 vehicles are leased by the organization for transportation service. The organization employs eight full-time and three part-time drivers as well as a transportation manager. There are also three volunteer drivers as well. While the primary trip purposes are to vocational training and work sites, transportation service for medical appointments is also provided. This organization provides transportation service seven-days a week, as needed, compared to weekday service typically provided by other social service and health service organizations.

7.1.5 Jurupa Area

The low density Jurupa Area must rely on individual members to provide their own transportation or to use public transportation to access health service facilities. The Jurupa Area is also served by one healthcare and two social service organizations previously described in previous sections. These organizations include:

- Inland Empire Health Plan (IEHP) with members throughout the Inland Empire described in Tables 7-1a and 7-1b.
- Inland AIDS Project, which provides transportation to individuals with the HIV or AIDS throughout the Inland Empire, as shown in Table 7-1a

- Inland Empire Job Corps, which provides transportation in a 60-mile radius of the City of San Bernardino, as shown in Table 7-1d.

7.1.6 Pass Area

Summary of Review

The Pass Area is similar to the Jurupa Area in that individuals must provide their own transportation or rely upon public transportation to access health service facilities. The Pass area is served by two health care organizations providing transportation. These were both previously described and include:

- Inland AIDS Project, which provides transportation to individuals with the HIV or AIDS throughout the Inland Empire, as shown in Table 7-1a

- Redlands Community Hospital, which provides transportation between its facility and the Banning/Beaumont Pass Area, as previously shown in Table 7-1d.

7.1.7 Barstow Area

Table 7-1e identifies two organizations providing healthcare services throughout the Barstow Area.

Table 7-1e
MEDICAL & SOCIAL SERVICE AGENCIES SERVING THE BARSTOW AREA

Organizations Providing Service In the Barstow Area	Service Industry	Transp Provided	Transp Types	# Vehicles	Annual Budget	Annual One-Way Trips	Cost Per Trip
Hospice of Barstow	Health Care	Yes	Direct	-	-	-	-
Oasis Counseling Center	Health Care	No	None	-	-	-	-
Rock Church and Outreach Center	Religious	Yes	Direct	4	-	19,836	-
DAAS Senior Info and Assistance -- Barstow	Social Service	No	None	-	-	-	-
Mojave Valley United Way	Social Service	No	Subsidy	-	-	-	-

Summary of Review

In addition to the organizations shown in Table 7-1e, the Barstow Area is also served by the Inland AIDS Project organization, which provides transportation service throughout the Inland Empire to persons with the HIV virus, as previously described in Table 7-1a. IEHP also provides medical transportation services to members in the Barstow Area who do not have any other means available to access health service facilities. IEHP information was previously provided in Tables 7-1a and 7-1b.

7.1.8 Victor Valley Area

Table 7-1f identifies one organization providing healthcare services throughout the Victor Valley Area.

Table 7-1f
MEDICAL & SOCIAL SERVICE AGENCIES
SERVING THE VICTOR VALLEY AREA

Organizations Providing Service In the Victor Valley Area	Service Industry	Transp Provided	Transp Types	# Vehicles	Annual Budget	Annual One-Way Trips	Cost Per Trip
Alcohol Drug Services Victor Valley Perinatal	Health Care	Yes	Direct	3	-	5,184	-
High Desert Domestic Violence Program	Residential	Yes	Direct + Subsidy	1	$ 14,800	696	$ 21.26
Knolls West Residential Care	Residential	Yes	Direct	1	-	-	-
St. John of God Health Care Services	Residential	Yes	Direct	6	-	600	-
DAAS Senior Info and Assistance -- Victorville	Social Service	No	None	-	-	-	-

Organizations previously mentioned that also serve the Victor Valley Area include:

- Inland Empire Health Plan (IEHP) with members throughout the Inland Empire described in Tables 7-1a and 7-1b
- Inland AIDS Project, which provides transportation to individuals with the HIV or AIDS throughout the Inland Empire, as shown in Table 7-1a

Summary of Review

- Four out of five health and social service organizations in the Victor Valley Area provide transportation to members, including service to medical facilities
- The amount of transportation service provided relative to the number of clients in each of the respective programs is somewhat higher than in other areas. For example, the Alcohol Drug Services Organization has three vehicles providing transportation to 81 members of which 20 require transportation assistance. The Domestic Violence Program organization has one vehicle for 25 members, Knolls Residential has one vehicle for 65 total members and St. Johns has six vehicles for 40 members
- The Domestic Violence Program provides transportation service in a 50-mile radius, as well as issuing subsidized transit passes

- The Knolls provides transportation service to members and includes destinations in Apple Valley, Hesperia and Victorville. The other two organizations have a more limited service area

- The St. John organization provides transportation service in a ten-mile radius of Palmdale Road while the Alcohol Drug Services Program provides transportation within 20-miles of the clinic, located in Hesperia

8. NATIONAL NON-EMERGENCENCY MEDICAL TRANSPORTATION MODELS

8.1 NEMT PROGRAM REVIEW

This section presents the results of the project team review of NEMT programs operating in California and throughout the United States. The national review was conducted in an effort to elevate the current understanding NEMT programmatic and transportation-related issues in order to gain further insight into the challenges inherent in operating NEMT programs. Understanding of the approaches and perspectives gained from currently operating programs was invaluable to the project team in identifying potential pitfalls in the development of NEMT service-related recommendations.

In consultation with the study project managers, the project team selected eight NEMT programs for review. In order to thoroughly explore the service-related aspects of each program (e.g. service area, population served, operating hours, clientele, etc.) the project team used the Transportation Services Interview Guide (Appendix I) to conduct interviews and obtain information. The project team used information obtained from program interviews to develop the profiles that follow.

The NEMT programs reviewed included the following:

1. On-Lok Pace Program, California
2. Arapahoe County Transportation Service, Colorado
3. Albany County Department of Social Services, New York
4. Pulaski Regional Transportation Program, Arkansas
5. Tri-Met Medical Transportation Program, Oregon
6. Ride Connection Volunteer Transportation Program, Washington
7. Miami-Dade Medicaid Metro Pass Program, Florida
8. HealthRide, California

The program model profiles developed by the project team include a mix of program types, which are presented below in Table 8-1 and described later in this section. A summary of the overall findings and observations of this exercise is presented at the end of this section.

Table 8-1
SELECTED NEMT TRANSPORATION MODELS

Organization & Service Area	Service Industry	Transp Model	Clientele	Annual Budget	Annual One-Way Trips	Cost Per Trip	Primary Funding Source
On Lok Pace Program -- San Francisco, Alameda, and Freemont Counties, California	Social Service	Non-Profit Direct Operations	Seniors, Medicare and Medicaid	NA	90,000	NA	Medicaid and Medicare
Arapho County Transportation Service -- Adams, Arapho, Broomfield, Boulder, Denver, Douglas, Jefferson, and Larimer Counties, Colorado	County Transp	Public Broker	Medicaid and ADA	$ 4,000,000	700,000	$ 5.71	75% Medicaid and 25% OAA and other
Albany County Department of Social Services -- Albany, New York	County Social Service	Private Broker	Medicaid	$ 2,220,000	156,361	$ 14.20	Medicaid
Pulaski Regional Transportation Program -- Pulask, Lonoke, and Faulkner Counties, Arkansas	State Health Service	Private Broker	Medicaid	$ 1,900,000	93,177	$ 20.39	Medicaid
Tri-Met Medical Transportation Program -- Multnomoah, Clakamas, and Washington Counties, Oregon	State Health Service	Public Transit Broker	Medicaid	$10,000,000	685,000	$ 14.60	Medicaid
Ride Connection Volunteer Transportation Program -- Multnomoah, Clakamas, and Washington Counties in Oregon and Clark County in Washington	Public Transit	Non-Profit Broker & Volunteers	Frail Elderly, Disabled & Medicaid	$ 3,400,000	286,000	$ 11.89	Tri-Met and transit funds; private donations
Miami-Dade Medicaid MetroPass Program - City of Miami and urbanized Dade County, Florida	State Health Service	Public Transit Pass Subsidy	Medicaid	$ 2,400,000	640,000	$ 3.75	Medicaid
HealthRide -- San Mateo County, California	County Health Service	Private Contract	Medi-Cal	$ 304,000	20,000	$ 15.20	Medi-Cal

8.1.1 On Lok Pace Program

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The On Lok PACE program is a Medicare and Medicaid certified Program of All-inclusive Care for the Elderly, with six centers located throughout the metropolitan San Francisco area. On Lok was selected because of the extensive transportation program that it offers. On Lok's participants are generally frail elderly of minority origin.

CHARACTERISTICS	DESCRIPTION
Program Clientele & Eligibility	Eligibility is open to older individuals who participate in Medicare and/or Medicaid and elect to join the HMO. There are over 700 participants with an average age of 83 years. The majority of these participants are Chinese (60%), Spanish (30%) or Other (10%) minority. Transportation is provided to centers, medical appointments and recreational outings.
Organizational Structure	On Lok Senior Health is a non-profit organization. On Lok staff verify client eligibility for Medicare or Medicaid. On Lok transportation staff performs scheduling and dispatching from a central office. Various routes are fixed for each vehicle based on the days that the individual participants are scheduled to be at the centers. On Lok hires its own drivers in order to meet the specific cultural, physical, and language needs of its participants
Service Area Characteristics	San Francisco metropolitan area, including the counties of San Francisco, Alameda, and Freeman.
Size of Program	The On Lok PACE program makes approximately 90,000 one-way trips annually. 26 lift-equipped passenger vans and Eldorado buses. Transportation program cost is included in overall program costs and is therefore not available.
Program Funding	Medicare and Medicaid capitated rates.
Program Innovations & Strengths	For added customer safety, two drivers are on board each vehicle. Drivers with language/cultural characteristics similar to those of program participants are recruited and hired. This helps the centers establish positive relationships with participants. Participation is very high averaging 2.8 days per week per participant.
Institutional Barriers and Program Weaknesses	Scheduling to achieve a more efficient use of vehicles is difficult due to the lack of adequate parking and traffic congestion in the area.

8.1.2 Arapahoe County Transportation Service

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ACTS operates a central call center to provide non-emergency medical transportation. Service is provided on behalf of the county Medicaid, Office of Aging, and the Americans with Disabilities Act programs for an eight-county area. ACTS is responsible for the call center, network development, accounting and verification of quality requirements. ACTS call center staff assigns trips to over 40 different for-profit and non-profit transportation companies that contract with ACTS. In 2000, The Community Transportation Association of America (CTAA) rated ACTS as one of the best county operated non-emergency medical transportation programs in the United States.

CHARACTERISTICS	DESCRIPTION
Program Clientele & Eligibility	Residents of the eight-county area who qualify for one of more of the following services: Medicaid, Older Americans Act (OAA); and Americans with Disabilities (ADA) programs.
Organizational Structure	Eligibility is determined by monthly downloads of eligibility files from the Medicaid program. For OAA eligibility, persons must be 60+ years of age and a resident of one of the participating counties. The ADA Office provides a list of customers eligible for ADA program participation. Scheduling is done through a central call center staffed ACTS County employees who verify eligibility, determine type of vehicle needed and assign trips to transportation network providers. Service providers under contract to ACTS provide the service.
Service Area Characteristics	ACTS operates in an eight-county area that includes Adams, Arapaho, Broomfield, Boulder, Denver, Douglas, Jefferson, and Larimer counties. This includes the urban Denver area and sparsely populated rural area along the eastern slope of the Rockies.
Size of Program	A total of 700,000 annual one-way passenger trips are provided (i.e., 500,000 Medicaid and 200,000 OAA and other County). Contractors own and operate a fleet of 40 lift-equipped and 160 ambulatory vehicles. The annual operating budget is about $4,000,000.
Program Funding	Revenues include $3,000,000 from Medicaid and $1,000,000 from the Older Americans Act and County funding.
Program Innovations & Strengths	Flexibility of program to do same day as well as pre-scheduled transportation, and to transport passengers to heavy and light rail stations as well as bus stops, which limits transportation costs. Although the program is described as curb-to-curb, drivers have flexibility to do door-to-door service. The cooperation of the transportation contractors with ACTS in providing whatever services are needed is excellent. For hospital discharges or inter-facility transfers, services are available 24/7/365. Program works well with hospitals that need specialized transportation.
Institutional Barriers and Program Weaknesses	Soaring insurance and fuel costs are surpassing rates paid by funding programs. There is a flat rate of $0.11 per mile that is insufficient to cover contractor costs. Travel is restricted to a 25-mile one-way distance, which limits some consumer choice in health care options (e.g., Medicaid HMO patients might move and, therefore, must change service providers who are most familiar with the patient's health treatment).

8.1.3 Albany County Department of Social Services

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The close involvement of public transit with an independent broker adds a very unique dimension to the management of this Albany County transportation program. A department within the public transit program is a subcontractor to the broker and is responsible for dispensing bus passes through various locations (e.g., hospitals, social service departments, doctor's offices). The result is that 75 percent or all Medicaid trips are provided using bus passes. This program has some interesting application to the San Bernardino--Riverside transportation planning process in creating greater access to healthcare services.

CHARACTERISTICS	DESCRIPTION
Program Clientele & Eligibility	Transportation is available to all Medicaid members who reside within Albany County and who have no other means of transportation available to them. There are approximately 22,000 Medicaid recipients who use the transportation system.
Organizational Structure	Transportation is available to all approved Medicaid participants who need it. The Department of Social Services provides a file to the broker. The broker, Medical Transportation Management, Inc. (MTM), handles reservations and assigns trips to local transportation providers. Inspection of vehicles, driver records, criminal background checks and driver training are completed by MTM project staff Trip verification, billing and payment of vendors are handled by MTM corporate offices. Local companies, under contract to MTM, provide transportation service.
Service Area Characteristics	Albany County includes urban, suburban and rural areas.
Size of Program	In FY 2003, this program provided 156,361 one-way passenger trips. There are 13 local transportation companies with 120 vehicles under contract with broker to provide all needed transportation for the service area. Vehicle types are: 51 sedans, 20 minivans, 18 vans, 2 SUVs, 26 lift-equipped vehicles, 14 ambulances, and three buses. Public transit passes are used to serve 75% of all the trip requests. The annual operating budget is $2,220,000.
Program Funding	Medicaid
Program Innovations & Strengths	Contracts with local transportation vendors for safe and reliable transportation services. Strong communication system with broker (i.e., MTM). Thorough review of transportation vendors' vehicles, drivers, and operations by broker. Thorough reporting of services, customer satisfaction and quality improvement metrics.
Institutional Barriers and Program Weaknesses	Program routing and scheduling being developed, but not yet in place.

8.1.4 Pulaski Regional Transportation Program

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This regional program adopted a transportation management program under a private broker (i.e., Medical Transportation Management, Inc.) in December, 2003. This program shows positive results in terms of service quality, cost management, and program management. This being a multi-county program under one management broker program has significant implications for San Bernardino and Riverside counties.

CHARACTERISTICS	DESCRIPTION
Program Clientele & Eligibility	Medicaid recipients who reside in Pulaski, Lonoke, and Faulkner counties.
Organizational Structure	Eligibility files are provided monthly to the broker, (i.e., MTM). Scheduling is done through a central call center staffed by the broker who after checking eligibility, determines the particular type of vehicle that is needed, the pick up and destination points, verifies that the health provider is Medicaid certified, and assigns the trip with the appropriate transportation provider. Private transportation companies are under contract to the broker. Customers who are eligible for public paratransit service are referred to the appropriate agency.
Service Area Characteristics	Urban, suburban and rural Arkansas counties of Pulaski, Lonoke, and Faulkner
Size of Program	There are an estimated 93,177 annual one-way passenger trips served by 12 local for-profit and non-profit companies under contract with MTM to provide transportation services. Public transit bus passes are also used. The fleet includes a total of 85 vehicles: 13 sedans, 18 minivans, 48 passenger vans, 3 lift-equipped vans, and 3 lift- equipped buses. Ambulance and stretcher vehicles are not included in this program. The annual operating budget is $1,900,000
Program Funding	Medicaid
Program Innovations & Strengths	Customer service with almost complete elimination of complaints since going to an independent management system. Verification of trips also has eliminated any suspected fraud.
Institutional Barriers and Program Weaknesses	Need to increase use of bus transportation in order to lower overall costs. Recent monthly bus utilization figures have increased from 4% to over 5%

8.1.5 Tri-Met Medical Transportation Program

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Tri-Met is one of the few public transit systems operating a medical transportation program under a contract with the State of Oregon. Tri-Met is the regional transportation broker for Medicaid and contracts with a private company for centralized reservations and scheduling.

CHARACTERISTICS	DESCRIPTION
Program Clientele & Eligibility	ADA eligible and Medicaid recipients
Organizational Structure	Tri-Met is a public transit district. The Oregon Medical Assistance Program (OMAP) staff determines Medicaid eligibility. Tri-Met determines eligibility for transportation. A Tri-Met subcontractor handles all requests for assistance, scheduling and dispatching. Tri-Met relies on a network of 60 medical transportation contractors. Providers include local taxi companies, stretcher car and other small medical transporters and a few nonprofit agencies. Most MTP drivers are paid, however, some providers use volunteer drivers. Providers are reimbursed directly by Tri-Met based on a rate structure. MTP participants using public transit are given bus tickets and passes. Otherwise, no fares are charged to Medicaid recipients.
Service Area Characteristics	Service area includes all of Multnomah, Clackamas & Washington Counties. Region includes compact urban neighborhoods, suburban areas and outlying small communities and rural areas.
Size of Program	In FY 2004, Tri-Met expects to provide over 685,000 medical trips with a budget objective of $15.24 per trip. 40% of trips are taken by fixed route bus. An exact count of vehicles used in this program is not available. Tri- Met uses its entire fixed route fleet plus vehicles of over 60 MTP contract providers. The annual MTP budget is $10,000,000 (includes 20% for administration).
Program Funding	All funding for Tri-Met's Medical Transportation Program comes from OMAP, the state Medicaid agency
Program Innovations & Strengths	Extensive use of fixed-route bus service has increased mobility of recipients and lowered individual trip costs. Evaluations indicate that program has contributed to improved quality of service among taxi and other private providers.
Institutional Barriers and Program Weaknesses	Lack of coordination between MTP client trips and paratransit services provided to ADA population. Only limited utilization of volunteer drivers and nonprofit providers in MTP.

8.1.6 Ride Connection Volunteer Transportation Program

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Ride Connection is a regional broker of medical and other mobility services for the elderly and disabled. Ride Connection is a nonprofit agency that coordinates medical transportation for Medicaid and non-Medicaid clients, making extensive use of volunteer drivers.

CHARACTERISTICS	DESCRIPTION
Program Clientele & Eligibility	Frail elderly, disabled and Medicaid recipients. The Ride Connection coordinates transportation assistance for about 10,000 individuals annually.
Organizational Structure	Ride Connection is a private nonprofit corporation. Provider agencies determine eligibility for their program services. Ride Connection staff screens non-clients. Both Ride Connection and local provider agencies receive trip requests. Requests received by Ride Connection are either brokered to local agencies or handled directly. Ride Connection relies on a network of 30 community transportation provider agencies. Providers include neighborhood based and regional nonprofit agencies, plus a few private taxi companies. Most network drivers are volunteers, however, some providers use paid drivers. Providers obtain vehicles and funds through Ride Connection, and are reimbursed by Tri-Met for Medicaid trips based upon agreed upon rate structures. No fares are collected, although donations are requested.
Service Area Characteristics	Service area includes all of Multnomah, Clackamas & Washington Counties in Oregon and Clark County, Washington. Ride Connection operates both inside and outside Tri-Met service district. Region includes compact urban neighborhoods, suburban areas and outlying small communities and rural areas.
Size of Program	In FY 2003, Ride Connection and its provider network provided 286,000 trips at an average cost of less than $13 per trip. Over 100,000 trips (37%) were for medical purposes. An additional 15% of the trips are for nutrition purposes. There are approximately 80 accessible vans and small buses in the combined fleets of Ride Connection's provider network. Additionally, many of the network's more than 300 volunteer drivers utilize their personal automobiles when providing medical trips. Ride Connection's annual operating budget is approximately $3.4 million.
Program Funding	The bulk of Ride Connection's funding comes through contracts with Tri-Met designed to supplement existing public transit and ADA paratransit with a network of community-based specialized transportation services. Additional financial support comes from federal Sec. 5310 and 5311 funds, the state's Special Transportation Fund (STF) and from private foundations.
Program Innovations & Strengths	Extensive use of volunteer drivers to deliver medical and other needed transportation services. High level of collaboration between community based agencies and transit providers. Use of escort services to meet the special needs of the frail elderly.
Institutional Barriers and Program Weaknesses	Only limited service available to younger non-disabled population and general public. Continuing challenge to overcome provider resistance to serving non-clients. Lack of centralized dispatching function for the network.

8.1.7 Miami-Dade Medicaid Metro Pass Program

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This program provides bus passes to Medicaid recipients. The program is administered by MDTA, an urban transit system operating a medical transportation program under a contract with the State Medicaid agency.

CHARACTERISTICS	DESCRIPTION
Program Clientele & Eligibility	Medicaid recipients who are able to use fixed-route transit *and* who have three or more verifiable medical appointments (six trips) a month. An estimated 5,300 individuals participate in the METROPASS program, about 1% of the area's Medicaid population.
Organizational Structure	Miami-Dade Transit is a department of county government. Florida's Agency for Health Care Administration (AHCA) determines Medicaid eligibility. Miami-Dade Transit determines individual's ability to use public transit. All trips taken on fixed-route, scheduled transit. MDTA approves & issues METROPASS applications. METROPASS recipients have unlimited access to all MDTA Metrobus and Metrorail services, which are available 24 hours a day, seven days a week. All MDTA drivers are paid. Eligible Medicaid recipients receive monthly a METROPASS for a $1 co-payment.
Service Area Characteristics	Service area includes the City of Miami and all of highly urbanized Dade County.
Size of Program	Annually, Miami-Dade Transit provides approximately 650,000 METROPASS trips at an average cost of $3.75 per trip. All trips are taken by fixed route bus or rail. Miami-Dade Transit uses its entire fixed route fleet of more than 900 buses plus rapid transit system. MDTA's METROPASS program totals $2.4 million annually, including administrative costs of approximately $465,000 (19%).
Program Funding	All funding for the METROPASS Program comes from AHCA, the state Medicaid agency
Program Innovations & Strengths	Use of economical fixed-route, scheduled transit service to lower medical trip costs. Single point of contact for ADA, other aging & paratransit, and some Medicaid trips. Emphasis on travel training to familiarize riders with mobility options available through bus and rail transit.
Institutional Barriers and Program Weaknesses	Lack of coordination with countywide Medicaid dial-a-ride contractor. Co-pay requirement awkward to administer and can limit participation by lower income Medicaid recipients.

8.1.8 HealthRide of San Mateo

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HPSM is a county-operated health plan serving Medi-Cal recipients. HealthRide is the non-emergency medical transportation program for health plan members. HPSM staff determines eligibility and assign trips to local service providers under contract to HPSM.

CHARACTERISTICS	DESCRIPTION
Program Clientele & Eligibility	HealthPlan members who are unable to get to medical appointments on their own.
Organizational Structure	HealthPlan of San Mateo is a county-run health system organized under Medi-Cal, the state's Medicaid program. HPSM staff is responsible for assessing the mobility needs of individual members. A full time HealthRide clerk receives trip requests and schedules rides for members. Most users are required to schedule service 24 hours in advance. Some rides scheduled up to two hours in advance of appointments. All HealthRide trips provided by local contractors, taxi companies and van operator enrolled as providers by the HealthPlan of San Mateo. Providers are reimbursed directly by HPSM, based on an agreed upon flat rate charges. The service is free to riders.
Service Area Characteristics	Service area includes all of San Mateo County, a highly urbanized part of the San Francisco Bay area.
Size of Program	According to 1998 evaluation report, nearly 20,000 trips were provided annually through the HealthRide program. At the time, it was estimated that 15% of HPSM's 50,000 members actually needed and utilized these medical transportation services. Fleet size not available. HealthRide contracts with three local taxi companies and one nonprofit van operator. All providers use their own vehicles. The HealthRide operating budget for the most recent year that figures are available was $304,000. Administrative costs came to less than 15%.
Program Funding	All of the HealthRide costs are covered directly by the HealthPlan of San Mateo. The health plan is reimbursed for some of those non-emergency travel costs by Medi-Cal, as part of the state's capitation payment to HPSM under Medi-Cal's managed care program. Un-reimbursed transportation costs are covered through HPSM's general funds.
Program Innovations & Strengths	This approach to meeting the health access needs of health plan members is relatively unique within Medi-Cal's managed care program. It was designed to address gaps in the existing public and community transit system. The HealthRide program has had low administrative costs. It has been documented that the initiative helped to reduce patient no-shows. It also became a lifeline for HPSM members with chronic health conditions.
Institutional Barriers and Program Weaknesses	Although judged to be successful in achieving its initial goals, the HealthRide program failed to document its contribution to reducing overall health care costs and improving patient access. Consequently, it was severely cut back in 2002 due to financial pressures. For example, although a number of stakeholders concluded that HealthRide helped to reduce the number of missed appointments, there was no hard data available as to actual cost savings. Because the HealthRide program could not obtain full Medi-Cal reimbursement, it was viewed as a "loss leader" by health plan managers operating in difficult financial times.

8.1.9 Highlights of Individual NEMT Programs

- The On-Lok program provides exceptional customer service to its multi-cultural clientele by ensuring that two drivers are present for trips and that language issues can be handled by bi-lingual staff and drivers.

- Arapahoe County has a successful program that is a multi-agency effort (Community Service Department, County Medicaid Agency, Office of Aging and others). The transportation program operates efficiently reporting a low cost per trip and a high quality of flexible service (e.g. same day service, door-to-door specialized service, as requested—hospital discharges, inter-facility transfers, etc.).

- Albany contracts with public transit to provide bus passes, which results in 75% of the trips being made by public transit.

- Pulaski, although the highest cost per trip NEMT service ($20.39) has a comprehensive program that includes distribution of bus passes, referrals of paratransit clients to the appropriate agency and a trip verification process that virtually eliminates fraud.

- Tri-Met the public transit provider serves as the broker of services through the use of subcontractors in accordance with an established rate structure. A high percentage of trips are provided by fixed-route (40%) since provision of bus passes are also part of this program. There is also limited use of volunteer drivers for this program.

- The Ride Connection program is unique because service is predominantly provided by 300 volunteers using their personal automobiles, supplemented as needed by paid drivers. Administered by a non-profit organization, the cost per trip ($11.89) is lower than that of the public and private brokerage arrangements with the exception of the Arapahoe program. This is the only program that reports that it is partially funded by transit funds and private donations.

- Miami-Dade is the only all bus pass program reviewed. The cost per trip reported for this program is significantly lower than all other transportation programs. This could be due to the fact that program costs may only include marginal costs of providing service to eligible users. Eligible Medicaid recipients receive a METROPASS (min. 3 trips/max. 6 trips per month). The program focus is on good customer service through provision of travel training sessions for riders.

- HealthRide is a program operated by a healthcare organization, providing service to eligible members. This transportation program operates in a highly urbanized area and users are requested to schedule trips 24 hours in advance. This program has the highest cost per trip of any of the programs reviewed. It has been previously documented and reported that this program has been successful in reducing the amount of no shows to medical appointments for this organization. However, the lack of consistent recordkeeping and documentation of accomplishments has resulted in program cut-backs and significant cost increases over time.

Summary of Findings and Observations

There are generally three service delivery models used by Medicaid non-emergency medical transportation services throughout the country, including:

- Direct client access to the transportation provider following eligibility determination by the local Medicaid agency;
- Assignment of eligible clients to specific authorized transportation providers by the local Medicaid agency; and
- The use of a full or modified form of brokerage or transportation management operation. The broker may be an arm of the governmental agency managing the program or the program may be outsourced to a private for profit or nonprofit entity.

The programs selected included a number of brokerages administered by various public, private and non-profit organizations, and assignment programs directly operated and contracted. Our review also included a transit pass only program. The following is a summary of the findings and observations.

- Over half of the selected programs are operated by state and county healthcare agencies and organizations or social service agencies. Only two of the programs are administered/operated by transit agencies. Increasingly, the decision has been made to move NEMT programs to a full or modified brokerage or transit management operation due to increasing workload on the Medicaid agency, costs and incidences of Medicaid fraud and abuse.
- The average cost per trip is $12.25 for seven of the eight programs (excluding On-Lok – no budget data provided). Miami-Dade was included in this average and the agency had the lowest cost per trip at $3.75. However, since this is a bus pass program, it is unclear whether costs reported reflect fully allocated or marginal costs. Arapahoe County's program reports the second lowest at cost per trip at $5.71.
- The diverse geographic areas (urban, rural, etc.) served, and/or the multiple county involvement in some programs (e.g. Arapahoe, Albany, Pulaski and Ride Connection are comparative to the existing geographic political environment in the Inland Empire.
- Almost all programs serve only eligible Medicaid and/or Medi-Cal recipients, and the elderly and disabled who also qualify under ADA and OOA programs. The only exception is the HealthRide program which is open to all members needing transportation to medical appointments subject to an eligibility determination.

The responsibility for operating NEMT programs continues to rest largely on the shoulders of healthcare organizations and agencies. This is logical given that Medicaid and Medi-Cal are the primary funding sources for these programs. However in recent years, transit agencies have ventured into the NEMT arena due at least in part, to the demand for services to medical activity centers (e.g. hospitals, clinics, medical complexes, etc) and to supplement deficiencies in social service and medical transportation services. It is clear that a significant level of coordination and cooperation between healthcare and transportation providers is critical to adequately address the myriad of administrative, operational and program oversight issues related to operation of NEMT transportation. In addition, in comparing all of the NEMT programs, institutional commitment, as well as, "hands-on" management and oversight of NEMT programs appears to yield the greatest reward in terms on cost and service efficiencies and overall service quality.

Another important component of successful NEMT programs is the provision of bus passes/fare media to clients that are deemed eligible and who are able to use fixed-route transit to get to medical appointments. Distribution of bus passes, in conjunction with other service provision strategies, provides the opportunity to indirectly offer lower cost travel options to a wider range of clients (i.e., low income families and mobile/active seniors) The value of this strategy is augmented by simultaneously providing new rider information to clients, including "how to ride the bus" training" and bus system information (route maps, schedules, etc.). This works to promote greater awareness and utilization of the transit system as a viable travel alternative, resulting in potentially lower overall NEMT program costs and increased transit ridership.

The project team also noted that the perceived success of various transportation programs has less to do with the actual cost per trip than the ability of the program to provide transportation to under-served segments and to consolidate responsibility for transportation in one part of the organization, allowing the organization to focus on its primary mission.

9. HEALTHCARE FUNDING

9.1 REVIEW OF FEDERAL, STATE AND LOCAL FUNDING FOR HEALTHCARE TRANSPORTATION

9.1.1 Understanding Medicaid

The Medicaid program dates back to 1965, when Congress enacted the Medical Assistance Program under Title XIX of the Social Security Act (Public Law 89-97). Medicaid is a federal entitlement program that pays for basic health care services for low income individuals and long term care for the elderly and disabled. It is a state-administered, jointly-funded program that today covers more than 50 million Americans – including providing health insurance for 38 million low income children and parents, and long-term care coverage for 12 million elderly and disabled adults. California's Medicaid population totals nearly 6.4 million residents, the second largest in the nation.[2]

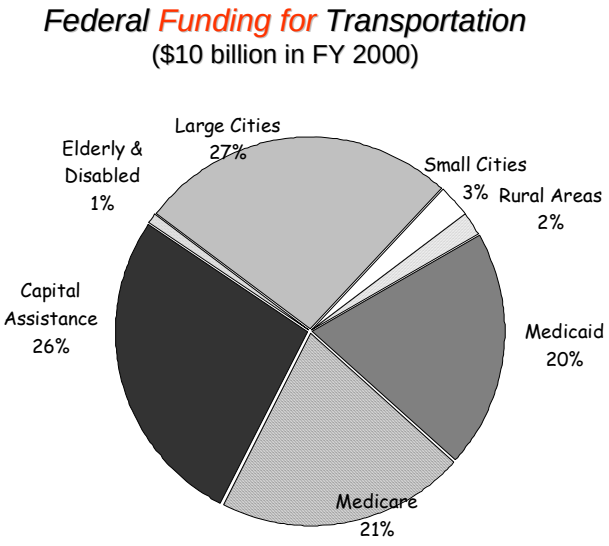
Non-emergency transportation (NET) was not mentioned in the original legislation establishing the Medicaid program. It evolved over the years as a result of administrative mandates reflecting numerous federal court decisions that require states to assure that Medicaid recipients can get to covered medical services. These so-called *access rights*, which were subsequently included in federal Medicaid regulations, are intended to guarantee that Medicaid recipients receive medically necessary transportation, and for state and federal agencies pay for it.

Regulatory History

Federal regulation 42 CFR 431.53 requires all states receiving federal Medicaid funds assure transportation for Medicaid beneficiaries "to and from [medical] providers". Each state's Medicaid Plan must describe how the state will meet this requirement equitably for all beneficiaries. Federal regulation 42 CFR 440.170(a) further defines medical transportation services and describes what costs can be reimbursed with Medicaid funds. (Excerpts from both federal rules are presented in Appendix J.)

[2] Persons Certified Eligible for Medi-Cal as of August 2003, California Department of Health Services (DHS), September 2003, http://www.dhs.ca.gov/MCSS

The entire Medicaid non-emergency transportation program rests on the enforcement of these two regulatory requirements. Over the years, these mandated medical transportation benefits for beneficiaries have contributed to the creation of a $2 billion a year NET service industry. Nationally, Medicaid spending on non-emergency transportation represents 20 percent of all federal transportation funding, supplementing traditional transit funds provided through the Federal Transit Administration (FTA).



State Programs Vary

Most states today comply with federal mandates assuring access to covered services. It is generally accepted that the lack of access to transportation must not restrict Medicaid recipients' access to medical services.

States are given considerable latitude in how they meet their Medicaid transportation obligations, and as a result there is wide variation in the way they assure access to care. Most states simply certify and pay individual transportation providers on a fee-for-service basis to transport Medicaid recipients who have no other way of getting to medical services. It is common practice for states to include a broad range of transportation options as elements of their Medicaid transportation programs, such as taxi subsidies, contracting with ambulance companies and nonprofit providers, purchasing bus passes on public transit, and directly reimbursing recipients and/or volunteers for mileage and gas.

A growing number of states have begun to explore new and innovative ways of managing their Medicaid transportation programs, which include:

- special arrangements to coordinate medical trips with other local transportation services;
- establishing medical transportation gatekeepers to improve service and check abuses; and
- Introducing new payment arrangements such capitated contracts, aimed at "capping" costs and encouraging efficiencies.

Additionally, more than half the states, including California, now "carve in" transportation as a required benefit under their Medicaid managed care contracts, shifting responsibility for assuring access to care from the state to individual health plans.[3]

The Centers for Medicare & Medicaid Services (CMS), the federal agency that oversees Medicaid funding, expects states to operate NET services in a cost-effective manner, and encourages the use of existing public transit, nonprofits and other low cost alternatives such as volunteer assistance furnished by family members or neighbors.[4]

How Medicaid Pays for Transportation

The federal government reimburses most state Medicaid costs. The level of reimbursement for medical transportation costs depends on how those services are classified. States can claim non-emergency transportation as either a *medical* or an *administrative* service. Reimbursement of *medical services* under Medicaid is based on the state's approved federal rate (FFP). Federal reimbursement rates are set by formula, ranging from 50 to 77 percent depending upon per capita income in the state. The FFP rate for California is 50 percent, although it was temporarily increased to 54.4 percent in 2003.[5] *Administrative service*s are reimbursed at a flat 50 percent. California currently classifies non-emergency Medicaid transportation as a *medical service*.

When transportation is treated as a *medical service*, states usually receive a higher reimbursement rate, but have less control over how services are provided. These federal requirements can limit a state's ability to design innovative medical transportation program (MTPs) – (e.g. schemes that may restrict which providers a recipient may call for a ride). States have more flexibility in how they provide *administrative services*, but also must accept a lower federal reimbursement rate. In order to maintain the favorable reimbursement rate for *medical services* under Medicaid, states can request a waiver from CMS.

Federal Waivers

To promote flexibility in the management of Medicaid programs, CMS allows states to seek *waivers* from some federal requirements. Two types of waivers have an important bearing on how Medicaid transportation services are provided, and are summarized as follows:

- *Freedom of Choice Waivers:* Traditionally, Medicaid recipients have the right to choose their own service providers, including transportation providers. This freedom of choice principal makes it difficult for states to develop efficiently managed medical transportation programs, so many states can seek Sec. 1915(b) waivers. These transportation waivers give states more administrative flexibility, allowing them, for example, to designate a specific carrier in a certain region.

[3] Medicaid Transportation: Assuring Access to Health Care, Community Transportation Association of America (CTAA), January 2001.
[4] In a 1991 letter to state Medicaid directors, supplementing 42 CFR 440.170, CMS (formerly HCFA) instructed states to utilize all available free transportation services, such as rides from relatives or friends, before authorizing Medicaid payment for transportation. Then, state Medicaid agencies are expected to use the least costly transportation services available, requiring them to "be the payer of last resort".
[5] Attachment to June 13, 2003 letter to State Medicaid Directors (SMDL #03-005) from Dennis G. Smith, Director, CMS' Center for Medicaid and State Operations, entitled Temporary Increase of the Federal FMAP (http://www.cms.hhs.gov/states/letters/smd61303.pdf)

- *Home & Community-Based Services Waivers:* In addition to covering needed medical transportation, Medicaid can also pay for beneficiaries' non-medical travel under the Home and Community-Based Services (HCBS) Waiver program. The purpose of HCBS or Sec. 1915(c) waivers is to increase options for independent living by certain "at risk" individuals by allowing states flexibility in implementing creative alternatives to institutionalized care. Mobility is recognized as essential in maintaining independence, so transportation is an eligible service under the HCBS waiver program.

HCBS services are reimbursed at the state's approved (FFP) federal matching rate. According to CMS's website, California currently has five separate HCBS waivers covering at risk groups. Transportation assistance is available to at least some the HCBS recipients.[6]

Differences Between Medicaid and Medicare

While the focus of this paper is on Medicaid, it is important not to confuse it with Medicare, the federal program that pays for the health care costs of the elderly. As the following chart illustrates, the two programs are similar in size and appearance, but there are some significant differences. The chief difference, from the perspective of this study, is that *Medicaid* recognizes non-emergency transportation as a billable expense and guarantees that patients can get to treatment. By contrast, *Medicare* makes no provision for routine medical trips, and only pays for ambulance transportation. Table 9-1a presents a comparison of the two programs.

Table 9-1a
COMPARISON OF MEDICAID AND MEDICARE

Characteristics	Medicaid	Medicare
Year Established	1965	1965
No. of People Enrolled	50 million*	41 million**
Annual Expenditures	$250 billion*	$257 billion**
Beneficiaries	Poor & Disabled	Elderly
Type of Program	Federal Entitlement	Health Insurance
Funding & Admin.	Joint	100% Federal
Medical Transportation	Emergency & Non-Emergency	Emergency Only
% in Managed Care	58%*	11%**

SOURCES: * MEDICAID FACTS, KAISER COMMISSION ON MEDICAID AND THE UNINSURED, JANUARY 2004.

** MEDICARE FACT SHEET, THE HENRY J. KAISER FAMILY FOUNDATION, APRIL 2003.

[6] http://cms.hhs.gov/medicaid/waivers/cawaiver.asp

9.1.2 California's Medicaid Program

In California, the Medicaid program is known as *Medi-Cal*. The Legislature In 1966 established the state medical assistance program. Responsibility for administering Medi-Cal is assigned to the Department of Health Services (DHS), under Title 22 of the California Code of Regulations. Medi-Cal currently enrolls nearly 6.4 million Californians, almost 20 percent of the state's population. Statewide, annual Medi-Cal expenditures currently exceed $22 billion.

In Riverside and San Bernardino Counties, Medi-Cal has a major presence, providing comprehensive health care coverage to almost 600,000 low-income area residents, about 17 percent of their combined population. Overall, Medi-Cal expenditures in the two counties exceed $1.5 billion annually, with San Bernardino County accounting for nearly 60 percent of the regional total.[7]

Medi-Cal Managed Care

Until fairly recently, most Medi-Cal recipients received health care on a "fee-for-service" (FFS) basis, an arrangement under which health care providers are paid by the state for each office visit or service provided.[8] Today, 51 percent of the state's Medi-Cal population is enrolled in one of four types of approved managed care plans.[9] Under managed care, participating health plans are paid a flat monthly rate for each enrolled Medi-Cal member, and must meet all of their health care needs, regardless of how many or which medical services are provided. Generally, Medi-Cal managed care programs operate in the state's most urbanized counties. Most rural areas of the state remain under the conventional fee-for-service arrangement.

Two-Plan Model

The most common type of Medi-Cal managed care arrangement is the so-called "two-plan model", in which two health plans compete in the same county -- a public or community-based entity known as the *local initiative*, and a private HMO or *commercial plan*.[10] Where two-plan models exist, enrollment is mandatory for most children and younger families within the Medi-Cal population, such as public assistance recipients, the medically needy and other low-income groups. Most older and disabled Medi-Cal enrollees, including SSI recipients, are not part of the managed care system and continue to be served on a fee-for-service basis.

Both Riverside and San Bernardino are "two-plan counties". Inland Empire Health Plan is the public entity, operating in both counties, while Molina Healthcare is the commercial counterpart plan. Together the two plans serve 53 percent of the region's Medi-Cal population. This is slightly higher than the state average. However, it is important to keep in mind that nearly 300,000 residents of both counties are covered by Medi-Cal's FFS program, and are not served by either plan.[11]

[7] State & County Data (01/03), Medi-Cal Policy Institute , <http://www.medi-cal.org/countyData>
[8] Managed Care Annual Statistical Report, p. 2, Medical Care Statistics Section, DHS, June 2003 (www.dhs.ca.gov/MCSS)
[9] State & County Data, January 2003, Medi-Cal Policy Institute (www.medi-cal.org/county/Data)
[10] op cit, MCSS Statistical Report, p. 10.

[11] Ibid, p. 12-13.

9.1.3 Medi-Cal's Medical Transportation Program

Notwithstanding federal requirements, Medi-Cal does little to ensure transportation to medical appointments for either managed care or fee-for-service beneficiaries. Unlike virtually every other state, *eligibility for transportation assistance under the Medi-Cal program is based on physical ability and not economic need or the availability of transportation alternatives.* Under California Medi-Cal rules, reimbursement of travel to medical appointments is restricted to persons who are physically unable to use conventional modes of transportation, *regardless of their access to a car or ability to afford a taxi, and without regard to their access to public transit services.*

Medi-Cal's narrow definition of who is eligible for transportation assistance is delineated in Section 51151, Chapter 3 (Health Care Services) of Title 22 of the California Code of Regulations, which reads as follows:

> "*Medical transportation services* means the transportation of the sick, injured, invalid, convalescent, infirm or otherwise incapacitated persons by ambulances, litter vans or wheelchair vans licensed, operated, and equipped in accordance with applicable state or local statutes, ordinances or regulations. Medical transportation services *do not include* transportation of beneficiaries by passenger car, taxicabs or other forms of public or private conveyances."

Regulatory History

Like most states, California's Medicaid plan includes a simple "Assurance of Transportation", guaranteeing that necessary transportation to and from covered medical services and providers will be available to Medi-Cal enrollees. The *methods* used to assure such transportation are spelled out in an attachment to the state plan.[12] The state plan assumes that free transportation services are available at the local and/or community level for most Medi-Cal enrollees who do not drive or cannot afford a car of their own. There have been previous legal challenges to that assumption, as discussed below.

Bingham V. Obledo

In 1983, Medi-Cal recipients successfully sued the state of California for failing to assure adequate transportation access to covered medical services.[13] The court found that the state's Medicaid plan was inadequate because it restricted transportation assistance to a limited group of Medi-Cal recipients – those who were too disabled to utilize conventional forms of transportation, such as taxis, buses and automobiles. The Secretary of DHS was ordered to amend the state Plan to assure that "all qualifying recipients" receive necessary transportation in actual practice. To comply with the court order, DHS expanded upon the information about transportation options that Medi-Cal field staff provided to county welfare and local Social Security offices. In effect, the agency did not change its restrictive reimbursement policies and practices. One former high-ranking Medi-Cal official stated that no meaningful change in state policy is likely without further direction from the Court.[14]

[12] California's Assurance of Transportation statement included in its State Medicaid Plan is reproduced in Appendix B.

[13] *Bingham v. Obledo,* Superior Court of the State of California for the County of Los Angeles, 1983.
[14] Interview with J. Douglas Porter, former head of Medi-Cal, July 1, 2002, Olympia, WA.

Managing Transportation Services

Management of medical transportation under Medi-Cal's fee-for-service program is decentralized, usually handled locally by Medi-Cal field office staff. To be eligible to bill for their services, transportation providers must be certified by Medi-Cal. Ambulances, wheelchair vans and litter vans are the only acceptable modes.[15] Local public transit agencies are not eligible for reimbursement under current Medi-Cal rules.

Under Medi-Cal's managed care program, participating health plans are responsible for meeting the medical transportation needs of their members. The plans are not reimbursed separately for their transportation services, but those costs are included in the capitated payments they receive from Medi-Cal. California's Medicaid transportation regulations are included under Title 22 of the state's Code of Regulations.

9.1.4 Analysis of Statewide Program

A detailed summary of Medi-Cal's medical transportation program is appended to this report. A summary of the statewide non-emergency transportation (NET) program is presented in Table 9-1b below.

Table 9-1b
STATEWIDE MEDI-CAL NET PROGRAM
(JULY 2002 THRU JUNE 2003)

Mode	Trips	%	Expenditures	%	Ave. Trip Cost
Ambulance	68,203	2%	$ 13,656,110	15%	$ 200
MC	27%		43%		318
FFS	73%		57%		157
Vans	2,981,770	98%	80,119,224	85%	$ 27
MC	10%		13%		34
FFS	90%		87%		26
Total NET	3,049,973	100%	$93,775,334	100%	$ 32
MC	10%		17%		50
FFS	90%		83%		28

SOURCE: MEDICAL CARE STATISTICS SECTION, DHS

[15] Title 22, Article 4, Section 51323 of California Code of Regulations, Scope and Duration of Benefits.

Expenditures

Despite its restrictive reimbursement and service eligibility policies, Medi-Cal's NET program is the second largest in the nation.[16] Our review of DHS reports for 2003 shows that state expenditures for non-emergency medical transportation totaled nearly $94 million – about 0.4 percent of the state's $22 billion Medicaid budget. *As a share of total Medicaid expenses, California reports expenditures of less than half as much on medical transportation as reported by other states.*[17]

Ambulance transportation accounts for 15 percent of all statewide NET expenses. The data also shows that another four percent is spent on transferring patients between hospitals and other medical facilities. That means that less than $90 million is actually available for enrollees who need help in getting to routine medical appointments. On a per capita basis, annual Medi-Cal NET expenditures total about $15 for each eligible beneficiary. Statewide, Medi-Cal managed care plans spend even less on transportation, about $5 per enrollee.

Medi-Cal's allocation of just $15 per recipient is a third of the average amount spent by other state Medicaid transportation programs. By contrast, four states (New Jersey, Connecticut, New York and Alaska) spend over $100 per Medicaid enrollee. At the other end of the spectrum, five states (Wyoming, Alabama, Tennessee Michigan and Utah) spend less than $10 per recipient. California is ranked 38th among the states in terms of per capita spending.[18]

Trips

According to Medi-Cal reports, recipients took just over 3 million one-way trips during the last fiscal year, at an average per-trip cost of $32. That's the equivalent of one trip every two years for each of Medi-Cal's 6 million enrollees. Compared to national averages, California provides one-fifth the number of trips to its Medi-Cal enrollees – at more than twice the average trip cost – than other state Medicaid programs.

Significant differences exist between the number and cost of trips being reported by Medi-Cal health plans and those reported under the fee-for-service program. For example, *although 51 percent of Medi-Cal recipients are enrolled in managed care, these health plans account for only one percent of all reported non-emergency trips.*

Some of the differences may be explained by gaps in reporting. For example, some healthcare organizations indicate that they do not report trips provided because they are not being reimbursed on a per trip basis.[19] It is also possible that the portion of the Medi-Cal population in the fee-for-service program is older and more transit dependent than the younger members enrolled with the plans, and, thus, is more costly to serve. However, the disparities are so great that they warrant further analysis and do suggest that differences in reporting mechanisms between the managed care and the fee-for-service programs are critical to understanding Medi-Cal transportation provision in California.

[16] Table 1: National Summary of State Medicaid Programs, Medicaid Transportation: Assuring Access to Health Care, Community Transportation Association of America (CTAA), January 2001.
[17] Ibid
[18] Ibid.
[19] Informal conversations with members of Project Management Team (PMT) assembled for SCAG health access study.

Utilization

The rate of utilization of medical transportation services (i.e. the percent of eligible beneficiaries who actually use available transportation assistance) can be a measure of both overall costs and of service quality. High utilization rates can indicate a well-served population, or point to excessive use and even abuse of the MTP system. Low numbers may be an indicator that transportation barriers may exist, and likewise, signal that patients are having difficulty accessing medical services and facilities. Again, these numbers must be viewed advisedly if they are not capturing detail from managed care plans.

Accurate utilization rates are also difficult to calculate because few state agencies keep track of how many and which recipients are actually utilizing transportation services. Nationally, it has been estimated that about 10 percent of state Medicaid clients utilizes NET services.[20]

Only partial utilization data is available from California's Department of Health Services. A special tabulation of unduplicated individuals receiving Medi-Cal transportation assistance in FY 2003 shows that the statewide utilization rate is around 4 percent. However, DHS reports dramatically different rates in utilization between the fee-for-service and managed care populations. For example, the utilization rate for Medi-Cal FFS recipients is seven percent, while only two percent of the managed care population reportedly receives transportation assistance.[21]

9.1.5 California in Perspective

Table 9-1c compares California's Medi-Cal Program with other state Medicaid transportation programs. However, as noted previously, this analysis includes information that is dominated by fee-for-service reporting while not consistently including transportation services purchased by managed care programs. As such, these findings reflect only a part of the puzzle that is Medicaid transportation in California.

Table 9-1c
COMPARISON OF MEDI-CAL TO OTHER STATE MEDICAID PROGRAMS

Characteristics	California	National Average *
Percent of State Population Enrolled in Medicaid	18%	14%
Average Medicaid Expenditure Per Recipient	$3,500	$5,600
Average Per Capita Expenditure for NET Services	$15	$46
NET as a % of Medicaid Budget	0.4%	1%
Average Trip Cost	$32	$16
Utilization Rate	4%	10%
% in Managed Care	51%	54%

SOURCE: MEDICAID TRANSPORTATION: ASSURING ACCESS TO HEALTH CARE, CTAA, 2001.

[20] Ibid
[21] Special tabulation of unduplicated individuals receiving Medi-Cal transportation assistance, prepared by Bradley Burch, Payment Systems Division, DHS.

9.1.6 Analysis of NET Services in Riverside & San Bernardino Counties

Tables 9-1d, 9-1e and 9-1f below summarize Medi-Cal's non-emergency transportation (NET) program in Riverside and San Bernardino Counties as reported to the State of California.

Table 9-1d
RIVERSIDE COUNTY NET PROGRAM
(JULY 2002 THRU JUNE 2003)

Mode	Trips	%	Expenditures	%	Ave. Trip Cost
Ambulance	3,322	3%	$ 703,603	18%	$ 212
MC	17%		40%		496
FFS	83%		60%		154
Vans	104,585	97%	3,139,028	82%	$ 30
MC	1%		1%		101
FFS	99%		99%		30
Total NET	107,907	100%	$ 3,842,631	100%	$ 36
MC	1%		8%		418
FFS	99%		92%		30

SOURCE: MEDICAL CARE STATISTICS SECTION, DHS

Table 9-1e
SAN BERNARDINO COUNTY NET PROGRAM
(JULY 2002 THRU JUNE 2003)

Mode	Trips	%	Expenditures	%	Ave. Trip Cost
Ambulance	4,448	3%	$ 908,826	19%	$ 204
MC	16%		40%		508
FFS	84%		60%		147
Vans	135,223	97%	3,758,941	81%	$ 28
MC	1%		2%		173
FFS	99%		98%		27
Total NET	139,671	100%	$ 4,667,767	100%	$ 33
MC	1%		9%		386
FFS	99%		91%		31

SOURCE: MEDICAL CARE STATISTICS SECTION, DHS

Table 9-1f
COMBINED REGIONAL NET PROGRAM
(SAN BERNARDINO & RIVERSIDE COUNTIES)
(JULY 2002 THRU JUNE 2003)

Mode	Trips	%	Expenditures	%	Ave. Trip Cost
Ambulance	7,770	3%	$ 1,612,429	19%	$ 208
MC	16%		40%		503
FFS	84%		60%		148
Vans	239,808	97%	6,897,969	81%	$ 29
MC	1%		1%		155
FFS	99%		99%		28
Total NET	247,578	100%	$ 8,510,398	100%	$ 34
MC	1%		9%		398
FFS	99%		91%		30

Source: Medical Care Statistics Section, DHS

Table 9-1g compares NET expenditures, trips costs and utilization rates from the various perspectives.

Table 9-1g
COMPARISON OF NET EXPENDITURES, TRIP COSTS AND UTILIZATION RATES

Area	NET Expenditures Per Capita	Average Trip Cost	Utilization Rate
Nationwide	$46	$16	10%
California	$15	$32	4%
Inland Empire Region	$14	$34	6%
Riverside County	$15	$36	5%
San Bernardino County	$14	$33	6%

Expenditures

In FY '03, combined Medi-Cal NET expenditures in the two counties came to $8.5 million, the equivalent of roughly $14 for each of the almost 600,000 eligible Medi-Cal beneficiaries in the Inland Empire. Expenditures for non-emergency transportation accounted for approximately 0.5 percent of all Medi-Cal outlays. The data shows that San Bernardino, with 57 percent of the region's Medi-Cal population, accounts for approximately 55 percent of the total NET expenditures.

According to Medi-Cal expenditure reports, health plans in Riverside and San Bernardino Counties account for just nine percent of total NET costs in the two-county area, although they serve 53 percent of the Medi-Cal population. It is unclear why this disparity exists.

Trips

Last year, nearly a quarter-million non-emergency medical trips were reported as taken by Medi-Cal recipients in the two-county area. The average cost of each trip varies according to the particular mode of travel. For example, van and taxi trips averaged about $29 each, but $208 was spent for each trip by ambulance. Costs in both counties were comparable to statewide averages, which are almost double those in other states.

Studies often focus on average trip costs as indicators of how efficiently transportation programs are managed – including the degree to which coordination exists between transit providers and utilization of existing public bus service. Medicaid programs that are bus-friendly tend to have lower trip costs. In Rhode Island, for example, where more than 90 percent of Medicaid trips are taken on local public transit, the average trip cost is less than $1. Similarly, in Portland, Oregon, where 65 percent of medical trips are taken on local transit buses, the average cost per trip has been lowered to $7.50.[22]

Similar disparities are present in the allocation of trips between Medi-Cal's fee-for-service and managed care programs, as reported to the State. *Of the nearly 250,000 NET trips reported for the Inland Empire region last year, Molina Healthcare and Inland Empire Health Plan members make up only one percent of the riders, although they represent over half the Medi-Cal population in the two-county area.*

In San Bernardino and Riverside Counties, transportation is "carved into" the per capita rate structure characterizing the two-plan managed care model. The level of transportation services provided by the two healthcare organizations in the Inland Empire may or may not be comparable to the fee-for-service programs, given that organizational reporting processes are very different. There is neither a specific line-item for transportation within the overall allocation to the managed care plan, nor is there a reporting mechanism for identifying dollars expended for transportation.

To gain further insight into this issue, Inland Empire Health Plan provided the project team with transportation information covering a one-month period (May 2004) for its members, reflecting the potential level of transportation activity that is not reported as a result of the "carved-in" approach for health plans (Table 9-1h).

Transportation is not budgeted as a single line item as costs are distributed among several departments within the organization. Overall IEHP budgeted $30,000 for fiscal year 2003/2004 for patient transportation expense but anticipates that it will easily spend three times that amount, as expenditures for the month of May alone were $13,511. Table 9-1h below shows IEHP's transportation experience during May 2004. A total of 238 one-way passenger trips provided to 53 unique members for an average of 4.5 one-way trips per person. Notably, one individual among these 53 received a round trip on 20 days (40 one-way trips) while everyone else received trips on just one or two days during that period. Excluding the high-use individual, the average one-way trips per person is 3.8 one-way trips or almost two round trips per person served during May. More than nine out of ten trips are purchased from private contractors (92%) with just 8% purchased from public transit operators. Only 4% of these trips were provided on Saturdays, the vast majority (94%) taken on weekdays. No trips were purchased for Sundays.

[22] Medicaid Transportation: Assuring Access to Health Care, Community Transportation Association of America (CTAA), January 2001.

To place IEHP's May transportation utilization in the larger context, May transportation expenditures of $13,511 accounts for 6.26% of all May patient-related expenditures. The 53 unique individuals who used transportation during May represent 0.02% of the total membership of that month of 271,195 persons.

As this data reporting system has recently been implemented, it is premature either to annualize this information. What can be restated is that IEHP has a modest supplemental transportation system in place, whereby case managers may arrange and pay for very modest levels of transportation support. Comparable information was not made available for Molina Health Care.

Table 9-1h

Inland Empire Health Plan -- Purchased Transportation Services, May 2004

May Day	May Date	PRIVATE OPERATORS: AAA Inland Empire Cab - San Bernardino/Riverside	Yellow Cab - San Bernardino/ Riverside	Med-Cab - San Bernardino/Riverside	Comfortline - San Bernardino	City Cab - Palm Springs	StateWide Express - Coachella Valley	PUBLIC TRANSIT OPERATORS: Omnitrans - San Bernardino Valley	Riverside Transit Agency	SunDial - Coachella Valley	VictorValley Transit Agency	Total Round Trip By Week Day	Total RoundTrip by Saturday	Total Roundtrips by Sunday	Total One-Way Trips (Weekday + Weekend Trips * 2)
Sat	5/1/2004				1								1		**2**
Mon	5/3/2002	2	1	1	1	1	1					7			**14**
Tues	5/4/2002	5	1	1	1							8			**16**
Wed	5/5/2004	1	1			1	1					4			**8**
Thur	5/6/2004	1				1						2			**4**
Fri	5/7/2004	4				1	1					6			**12**
Sat.	5/8/2004		1									-	1		**2**
Sun.												-		0	**0**
Mon	5/10/2004	1		1		1						3			**6**
Tues	5/11/2004	3	1	2								6			**12**
Wed	5/12/2004	2	1	1		2						6			**12**
Thur	5/13/2004	2	1		2	1						6			**12**
Fri	5/14/2004	4	1		1	1						7			**14**
Sat	5/15/2004		1		1			1				-	3		**6**
Sun.												-		0	**0**
Mon	5/17/2004	4		1					1			6			**12**
Tues	5/18/2004	3	1	1								5			**10**
Wed	5/19/2004	4	1		1		1		1			8			**16**
Thur	5/20/2004	2	1		1							4			**8**
Fri	5/21/2004	4	1	1					1			7			**14**
Sat.			1									-	1		**2**
Sun.												-		0	**0**
Mon	5/24/2004	3	1	2					1			7			**14**
Tues	5/25/2004	2	2									4			**8**
Wed	5/26/2004	2	1		1			1	1			6			**12**
Thur	5/27/2004	3	1		1							5			**10**
Fri	5/28/2004	1	1						1	1		4			**8**
Sat	5/29/2004				1							-	1		**2**
Sun.	5/30/2004											-		0	**0**
Mon	5/31/2004										1	1			**2**
Round Trips		**53**	**20**	**11**	**12**	**9**	**4**	**2**	**1**	**6**	**1**	**112**	**7**	**0**	**238**
One-Way Passenger Trips		106	40	22	24	18	8	4	2	12	2	0	14		**238**

Summary of May 2004 IEHP Purchased Transportation	One-Way Trips	%	Round Trips	%
All Weekdays	224	94%	112	94%
All Saturdays	14	6%	7	6%
All Sundays	0	0	0	0
Total Trips	**238**	**100%**	**119**	**100%**
Unique # Members	**53**		**53**	
Ave. Trips Per Member	**4.5**		**2.2**	
Privately Contracted Trips	218	92%	109	92%
Public Transit Trips	20	8%	10	8%

Adapted from information provided from IEHP Transportation Database, June 21, 2004, J. McShane.

9.1.7 IEHP Response to Members' Medical Transportation Needs

Inland Empire Health Plan (IEHP) has proactively chosen to address the transportation needs of its consumers in several ways, with none of these efforts directly captured in the statewide and countywide statistics on Medi-Cal non-emergency medical transportation utilization. The IEHP approach involves the following elements:

1. ***Database of transportation resources*** – information to case managers on available transportation services, areas served and costs, is now available through an in-house database with links to outside agencies' websites.

2. ***Referral to consumers*** – options and choices for consumers are explored by the case manager, after an assessment of the medical need and that no other transportation is available.

3. ***Selective use of public and contracted transportation*** – IEHP will pay for services on a per-trip basis but dollar amounts are limited by department within the agency so usually just single event needs (one round trip) are supported.

4. ***Record-keeping on IEHP purchased services*** – information to administrators on IEHP members' utilization of transportation is now collected to begin to watch for patterns in utilization.

IEHP administration reports that all Medi-Cal members are potentially eligible for transportation assistance subject to verification of member's lack of other means of transportation. The Plan has not adopted an official definition of NEMT. Typically, IEHP considers NEMT as transportation necessary to access medically necessary non-emergency health services. Members requesting transportation assistance are screened by care management staff to verify that other means of transportation are not available and to confirm medical necessity. Historically, the Health Plan has authorized transportation assistance when it is the only way members can get to medically necessary medical services.

IEHP concerns related to transportation are several. One is member utilization and the particular challenge of determining need. Despite making individual departments accountable for their transportation expenditures, requests for assistance only continue to grow. It is difficult for case managers to assess whether consumers' need is genuine, no other alternatives truly exist, or individuals are learning how to abuse the system. Secondly, it has been a challenge to educate IEHP case managers as to what resources do exist, although the in-house database has gone a long way towards informing staff of what is available. Finally, it is difficult to get consumers to use public transit, even where it does exist. Concerns include traveling to unknown medical destinations, transferring between buses and handling public transit with a sick child or two in tow. Concerns within IEHP appropriately exist because of the reported growth in utilization of purchased transportation services and because the open-ended nature of existing transportation referrals.

9.1.8 Conclusion

This review has presented state-level source information that, when contrasted with other states suggests that California's non-emergency medical transportation policies are not on par with those of other states. The examination of expenditures at the County level, for San Bernardino and Riverside Counties, would appear to support findings of low expenditures for NEMT services, high unit costs and lower-than-expected utilization of NEMT services.

However, reporting differences between managed care plans and fee-for-service plans are significant. The experience of IEHP, whose NEMT transportation expenditures are three times their internally budgeted level, is significant in that its trip-making activity is apparently not captured. This suggests wide variation in the levels of reporting, across the state for managed care programs. As such, it would be premature to make definitive statements about California Medi-Cal policies, given the high variability in reporting, except that transportation services are operated and transportation-related data and costs are reported using different methods in the fee-for-service environments versus the capitated, managed care environment.

There does appear to be an undetermined level of need for transportation assistance that presents itself to healthcare agencies and organizations. The difficulty in assessing the level of need in relation to available resources make for some managerial uncertainty as to which trips to approve and which to defer. Screening program participants to determine transportation needs and the best, most cost effective means to meeting those needs requires effort beyond that commonly associated with healthcare or public mass transportation organizations. IEHP's development of a geographic-specific database is an important step in the quest to provide “informed” assistance to case managers in making transportation recommendations.

IEHP for example, has made significant initial steps in addressing non-emergency medical transportation needs, particularly through the in-house development of significant, internal transit information service. In order for public transit to assist in responding to the needs of those persons needing transportation assistance, greater information is needed. Such additional information includes, but is no limited to:

- ❑ trip origin and destination information
- ❑ time of day of originating and return trip
- ❑ nature of trip information: e.g., single trip or repeating trip requests

9.2 NATIONAL NON-EMERGENCY MEDICAL TRANSPORTATION FUNDING AND CORRESPONDING PROGRAMS

For the purposes of obtaining information on funding sources that are currently being used to fund medical transportation programs nationally, the project team developed and utilized the Transportation Funding Interview Guide (Appendix K). Interviews were conducted with selected programs throughout the country, focusing specifically upon the following medical transportation funding sources:

- ❑ Community Development Block Grants
- ❑ Section 5310
- ❑ Section 5311
- ❑ Title III-B of Older Americans Act
- ❑ Medicaid

The information presented on the following pages summarizes elements of each funding program relative to selected medical transportation program models currently operating in the country. Funding and program elements summarized include:

- ❑ Program Description (purpose, eligible funding recipients, etc.)
- ❑ Administration and Funding (funding levels, matching requirements)
- ❑ Innovative Approaches to Medical Transportation (i.e. specific application of funding in program use)

A summary of each source of funding and corresponding program model is presented below.

Medical Transportation Funding Source:
COMMUNITY DEVELOPMENT BLOCK GRANTS

INNOVATOR

Connect-A-Ride
Monroe County, New York

The federal Department of Housing and Urban Affairs (HUD) is not generally thought of as a source of funding for medical or other transportation services. However, in a growing number of urban and rural communities nationally, HUD's Community Development Block Grant (CDBG) program has been used to pay for non-emergency medical trips, build transit centers, and to buy buses and other vehicles. The following case study exemplifies the potentials for using these CDBG funds in an innovative and effective way to overcome access to health problems.

SUMMARY

CHARACTERISTICS	DESCRIPTION
Funding Source	Federal
Program Description	The Community Development Block Grant (CDBG) program was created in 1981 under the Housing and Community Development Act. It is considered one of the most reliable funding sources for addressing the critical social, economic and environmental problems facing both urban areas and rural communities. (The program regulations are codified at 24 CFR 570.)
(a) Purpose	The stated purpose of the CDBG program is to assist states in developing viable communities by providing decent housing and a suitable living environment.
(b) Eligible Funding Recipients	Funding is available to cities and counties who, in turn, are responsible for designing community development plans and projects. The state must ensure that at least 70 percent of its CDBG funds are used for activities that benefit low- and moderate-income persons.
(c) Eligible Activities	Communities receiving CDBG dollars may use those funds for a variety of purposes, including the purchase of property, renovation of buildings, and the provision of public services. Examples of transportation-related uses include buying and constructing transportation facilities, planning and operating community transit services, and purchasing passenger vehicles.
Administration & Funding	CDBG funds are allocated to each state based on a statutory formula that takes into account population, poverty, the incidence of overcrowded housing and age of housing. The CSBG program is administered by the federal Department of Housing and Urban Development. In California, it is run by the Department of Community Affairs. All CDBG funds are distributed by the state to units of general local government.
(a) Funding Levels	In FY 2004: $4.9 billion in Community Development Block Grants were available nationally. There are no reliable figures available regarding total transportation-related expenditures under the CDBG program at either the national or state level.
(b) Matching Requirements	There are no local or state matching requirements on CDBG funds. Furthermore, CDBG funds can be used as local match with other federal programs, such as transit assistance under Sections 5310 and 5311.

SUMMARY (CONTINUED)

CHARACTERISTICS	DESCRIPTION
Innovative Approaches to Medical Transportation:	
(a) New York Model	Connect-A-Ride is a community transportation service operated by Medical Motor Services, a nonprofit transportation provider in upstate New York. The Connect-A-Ride service is funded by Monroe County through its Community Development Block Grant Program. It's purpose is to assist residents in smaller outlying communities and rural areas who do not have access to local public transportation to get to distant medical and other services. CDBG funds are used to subsidize Connect-A-Ride trips for local residents, assuring, for example, that people can go anywhere in the county for no more than $3. County CDBG funds are also available to purchase new vehicles or to replace older ones dedicated to this rural community development service. Connect-A-Ride also operates a second CDBG-funded program established by the town of Irondequoit, New York. The project, which operates in collaboration with Faith Link, a faith-based ministry, is dedicated exclusively to providing medical transportation assistance to disadvantaged town residents.
• **Strengths**	Funding is reliable and can be used flexibly for medical transportation planning, operating and capital purposes. Unique status of the program allows CDBG funds to be matched with other federal programs. Project approval process means that local government support of program activities is assured.
• **Barriers**	HUD has few guidelines or experience with communities interested in using CDBG funding for transportation purposes. Limited models available nationally, so that considerable patience and hard work is required to develop medical transportation program with these resources.

Medical Transportation Funding Source:
5310 PROGRAM—PURCHASE OF SERVICES

INNOVATORS

Rural Coordinated Transportation Council
Elgin, Texas

Access Services, Inc.
Los Angeles, California

Traditionally, Section 5310 funds have been used to purchase vehicles for specialized transit services for the elderly and people with disabilities. But a few innovators are demonstrating how these funds can help meet medical transportation needs by using these funds to buy services from existing transit providers.

SUMMARY

CHARACTERISTICS	DESCRIPTION
Funding Source	Federal
Program Description	Established under Section 5310 of the Transportation Equity Act for the 21st Century (TEA 21). Statutory authority under 49 U.S.C. § 5310(a)(2) [P.L. 105-178].
(a) Purpose	Formula grants to states to meet the special transportation needs of the elderly and people with disabilities, including access to medical services.
(b) Eligible Funding Recipients	Historically, only nonprofit agencies could apply for Sec. 5310 funds. However, recent amendments have opened up eligibility to public agencies when no nonprofits are available, or to promote coordination.
(c) Eligible Activities	Traditionally, these funds have been used for capital assistance only—to purchase vehicles and related equipment designed to serve seniors and individuals with disabilities. However, recent program expansions allow local agencies to use funds to purchase transportation from organizations already providing transit services, rather than requiring them to buy their own vehicles.
Administration & Funding	Section 5310 program is administered by the Federal Transit Administration, an agency within the US Department of Transportation. Funds are allocated to each state on the basis of the state's share of the national senior and disabled population. States then are responsible for administering the program. In California, Caltrans and the California Transportation Commission administers the program.
(a) Funding Levels	FY 2004: $90.7 million. California's share: $9.5 million.
(b) Fund Transfers	Under "flexible funding provisions of TEA 21, other federal highway and transit funds can be transferred into the Section 5310 program, thereby expanding medical and other transportation assistance available to the community. In FY 2001, the funding level for Section 5310 was more than doubled as a result of outside transfers, including $34 million available to Access Services for medical and other special transportation services.
(c) Matching Requirements	By statute, these federal funds can be used to pay up to 80 percent of most project costs, with a 20 percent matching contribution required from local or state sources. Section 5310 funds can be used to pay up to 90 percent of costs for projects designed to meet ADA requirements.

SUMMARY (CONTINUED)

CHARACTERISTICS	DESCRIPTION
Innovative Approaches to Medical Transportation:	
(a) Texas Model	Since 1999, the Rural Coordinated Transportation Council, a nonprofit agency based in Elgin, TX, has been using Sec. 5310 funds to help meet medical and other transportation needs in rural Bastrop County. Sec. 5310 funds are used to purchase bus tickets from the local transit agency (CARTS) for travel by disadvantaged area residents to local medical facilities and for other basic services. NEMT eligibility is available to elderly and disabled riders only.
• **Strengths**	Improved coordination of transit resources and utilization of vehicles. New ridership for public transit system. Higher quality transportation for agency clients.
• **Barriers**	5310 funds for purchase of services are limited. Lack of established program guidelines. Administrative paper work burdensome. Needy low income families ineligible for assistance.
(b) California Model	Access Services, Inc. is the provider of ADA paratransit services for the Los Angeles County Metropolitan Transportation Authority (LACMTA). Although it is estimated that almost 250,000 trips are provided each year to Medi-Cal recipients going to medical appointments, Access Services is unable to obtain reimbursement from Medi-Cal because of restrictive reimbursement policies. Consequently, LACMTA secured the transfer of $34 million in federal funds into the Section 5310 program, by far the largest use of these TEA 21 “flexibility” provisions to date. The transferred 5310 funds are used to purchase trips from Access Services for Medi-Cal and other transit dependent users of the LACMTA system. To be eligible for medical transportation, all individuals must meet Access Services’ ADA eligibility guidelines.
• **Strengths**	Helps to replace missing Medi-Cal funding. Purchase of service, coupled with transfer flexibility, significantly increase available funding and utilization of existing services.
• **Barriers**	Eligibility limited to ADA certified passengers. Unpredictability of funding since there is not dedicated source.

Medical Transportation Funding Source:
SECTION 5311 PROGRAM—MEDICAL SERVICE ROUTING

INNOVATOR

Capitol Area Rural Transit System (CARTS)
Austin, Texas

The traditional route structures of many rural transit agencies are built around the medical transport needs of the disadvantaged populations they serve. Medical trips often make up a major reason why people use the rural systems, and the demand is growing. As described in this case study, some innovative providers in rural areas are using Section 5311 funds to set up medical service routes -- scheduled, fixed routes designed primarily to assure access to needed medical services.

SUMMARY

CHARACTERISTICS	DESCRIPTION
Funding Source	Federal
Program Description	Established under Section 5311 of the Transportation Equity Act for the 21st Century (TEA 21). Statutory authority under 49 U.S.C. § 5311 [P.L. 105-178].
(a) Purpose	Formula grants to states for public transit assistance in non-urban areas.
(b) Eligible Funding Recipients	Funding under the Section 5311 program is available to state agencies, local public entities, including tribal governments, nonprofit organizations and public transit authorities.
(c) Eligible Activities	Funding can be used for capital, operating and administrative purposes. All transit services must be designed to serve the needs of rural residents and their communities, i.e. places of 50,000 or less outside existing urbanized areas. All services must be open to the riding public, and trip purposes cannot be restricted.
Administration & Funding	Section 5311 program is administered by the Federal Transit Administration, an agency within the US Department of Transportation. Funds are allocated to each state based on that state's share of the national non-urban population. States are responsible for administering the program. In California, Caltrans administers the program.
(a) Funding Levels	FY 2004, funding for Section 5311 totaled $239.4 million nationally. California's apportionment came to $10.3 million.
(b) Fund Transfers	Under "flexible funding provisions of TEA 21, other federal highway and transit funds can be transferred into the Section 5311 program, thereby expanding medical and other transportation assistance available to in rural areas. In FY 2000, almost $8 million in additional 5311 funds was available in California as a result of transfers into the program.
(c) Matching Requirements	5311 grants can be used to cover up to 80 percent of administrative costs and the purchase vehicles and other capital equipment, and to pay up to 50 percent of the operating costs of providing rural transit services.

SUMMARY (CONTINUED)

CHARACTERISTICS	DESCRIPTION
Innovative Approaches to Medical Transportation:	
(a) CARTS Model	The Capitol Area Rural Transit System (CARTS) is a rural transportation agency serving nine Texas counties covering 7,500 square miles, most of the area surrounding the state capitol of Austin. CARTS' intercity service links together 123 small and medium-sized towns within its service area. Because of the growing pressure to meet the medical transportation needs of its general riding public, CARTS has established a number of medical service routes, connecting rural community residents directly with hospitals and other health facilities. While other trip purposes are accommodated, the schedule and routes are designed primarily as vital links to major treatment centers in this rural service area. Most of the system's medical trips are for simple doctors' appointments, others are hospital discharges or admissions. The challenge is to transport people from small towns and rural areas to increasingly urban-based health providers and medical specialists.
• **Strengths**	This approach allows transit agency to make more efficient use of limited resources by switching to more economical route structure rather than relying on more costly demand response services. These service routes improve coordination of general public and client travel, reducing need for customized services.
• **Barriers**	Developments such as shifts to outpatient services and the decentralization of dialysis and other facilities make it difficult for smaller transit agencies to maintain regular, comprehensive service.

Medical Transportation Funding Source:

TITLE III-B OF OLDER AMERICANS ACT

INNOVATOR

Medical Motor Services
Rochester, New York

It is generally thought that the Older Americans Act primarily funds multi-purpose senior centers, nutrition and other social service programs for the elderly, but that it is not a major transportation resource. However, transportation is the second largest support service for seniors funded under the Act, and medical transportation has become an important element of that program. The following is an example of how communities are using OAA funds to better ensure that older non-drivers can get to needed medical services.

SUMMARY

CHARACTERISTICS	DESCRIPTION
Funding Source	Federal
Program Description	The Older Americans Act (OAA) was enacted in 1965 to help promote access to health care and the general wellbeing of the nation's elderly population. [P.L. 89-73]. Funding for transportation is available under several sections of the OAA, including Title III (Support Services), Title VI (grants to American Indian Tribes), and the Home and Community-Based Services Program. [See 42 U.S.C. Chapter 35, Subchapter III. Part B. §3030d(a)(2)]
(a) Purpose	Formula grants to states for a variety of "support" services designed to improve the quality of life for older persons.
(b) Eligible Funding Recipients	Funding is available to state units on aging, who in turn, provide financial assistance to Area Agencies on Aging (AAA). Most local AAAs use a portion of their funding allocations for transportation. Participation in OAA-supported programs is restricted to persons 60 years of age and older.
(c) Eligible Activities	Funding is flexible, and can be used for a variety of advocacy and service activities, including nutrition and transportation programs, in-home services, family caregiver support, to fill in gaps in service delivery programs aimed at seniors, and to help older persons to remain independent in their own homes and communities.
Administration & Funding	Older Americans Act funds are allocated to each state based on the state's share of the US population aged 60 and above. At the federal level, the program is run by the Administration on Aging (AoA), located within the Department of Health & Human Services. In California, it is administered by the Department of Aging.
(a) Funding Levels	In FY 2004: $357 million was available nationally under Title III-B of the Older Americans Act. Of that, AoA staff estimate that $70 million will be spent on transportation, but with smaller amounts spent on transportation under the Title VI program for Native Americans and Home and Community Based Services initiative. No estimates are available as to the amounts spent on medical transportation.
(b) Cost Sharing	Over the years, there has been a legislative prohibition against charging fees for services provided with OAA funds. However, amendments to the Act in 2000 included new "cost-sharing" language that will permit agencies to charge fares for medical and other transportation services funded under Title III-B.

SUMMARY (CONTINUED)

CHARACTERISTICS	DESCRIPTION
Innovative Approaches to Medical Transportation:	
(a) New York Model	Medical Motor Services is a nonprofit transportation provider that has been in business since 1919. MMS provides non-emergency medical transportation to residents of the City of Rochester and Monroe County, NY. For many years, Title III-B funds were made available by the local Area Agency on Aging (AAA) to individual senior centers to buy vehicles and offer medical trips to their elderly clients. Today, however, under a fixed-price contract with the AAA, Medical Motor Services provides medical transportation to the senior centers and eligible seniors in the area, using III-B funded vehicles and drivers. Transportation is available for routine appointments, health screenings and follow up treatment, with service available to both individual Medicare patients and health plan members. Older Americans Act funds are also used to transport seniors to adult day care activities and related services.
• **Strengths**	Allows transportation assistance to be offered by a professional provider, improving the overall safety and quality of service. Centralized agreement with a regional provider resulted in greater cost efficiencies over individual contracts with local centers. For example, Medical Motor Services is able to utilize III-B funded vehicles for other project purchase during down times, thereby spreading the operating costs of the system.
• **Barriers**	Stagnant and declining federal funding for the Older Americans Act has limited program's ability to keep pace with need and demand. Prior restriction on charging fares to OAA clients forced dependence on a contributions system and reduced potential program revenues.

Medical Transportation Funding Source: MEDICAID

INNOVATORS

Tri-Met
Portland, Oregon

There is growing recognition within federal and state circles that the traditional, decentralized, fee-for-service approach to non-emergency medical transportation (NEMT) has not been very effective in controlling costs or fraud and abuse, or in assuring universal access to health care. Brokerages represent the best known and most successful approach to managing medical transportation that has emerged in recent years. Two Medicaid-funded models are presented here, a regional transportation brokerage operated by a local transit system, and an example of a medical transportation brokerage in a managed care, capitated environment.

SUMMARY

CHARACTERISTICS	DESCRIPTION
Funding Source	Federal and State
Program Description	The Medical Assistance Program (more commonly known as "Medicaid" was established in 1965 under Title XIX of the Social Security Act (Public Law 89-97). Federal regulations require states to provide non-emergency medical transportation (NEMT) assistance to Medicaid beneficiaries who lack transportation options. (42 CFR 431.53 and 42 CFR 440.170(a).
(a) Purpose	To assure that all Medicaid beneficiaries can get to and from covered medical services.
(b) Eligible Funding Recipients	Traditionally, state Medicaid agencies have relied on taxis, ambulances, medical vans and individuals using their own cars to provide medical trips. Increasingly, states are utilizing the services of public transit agencies, nonprofit and other lower costs providers as well as brokers to coordinate and deliver needed transportation to Medicaid clients.
(c) Eligible Activities	Transportation assistance is limited to eligible Medicaid beneficiaries, and is designed to assure access to covered services only. Reimbursement to providers can take a variety of forms, including gas vouchers, mileage reimbursement, usual & customary fares, negotiated rates and pre-paid, capitated financial arrangements.
Administration & Funding	Medicaid is a jointly-financed and run federal/state partnership. At the federal level, it is administered by the Centers for Medicare & Medicaid Services (CMS), formerly the Health Care Finance Administration (HCFA). In California, the Medicaid program is commonly known as "Medi-Cal", and is administered by the Department of Health Services.
(a) Funding Levels	Nationwide, it is estimated that roughly $2 billion is spent annually on non-emergency transportation services, about 1 percent of the total Medicaid budget. California spends an estimated $94 million on NEMT services, the equivalent of 0.4 percent of the overall Medi-Cal budget.
(b) Matching Requirements	The federal government covers between 50 and 85 percent of all state Medicaid expenditures, depending upon the relative income of the state's population. The federal reimbursement rate in California is 50 percent, although it was temporarily increased to 54.4 percent in 2003.

SUMMARY (CONTINUED)

CHARACTERISTICS	DESCRIPTION
Innovative Approaches to Medical Transportation:	
(a) Oregon Model	Tri-Met began operating as a medical transportation broker in 1994, under an interagency agreement with the Oregon Medical Assistance Program (OMAP). The transit district is responsible for assuring that all eligible Medicaid beneficiaries in the tri-county metro area have access to medical services. Tri-Met operates a call center to take requests for medical trips, and assigns rides to any one of more than 60 medical transportation companies in its provider network. Each provider is reimbursed directly by Tri-Met, using contract funds provided by OMAP. About 65 percent of all medical trips are taken on the regular Tri-Met bus and rail system.
• Strengths	Lower trip costs due to the extensive utilization of existing bus services. Enhanced mobility of recipients through use of bus passes. Brokerage also has contributed to increased quality of service among local taxi and other private providers.
• Barriers	Little coordination between Trivet's medical transportation program, its own ADA paratransit service and other community transit initiatives. Only limited utilization of volunteer drivers and nonprofit providers.
(c) Missouri Model	When Missouri implemented it Medicaid managed care program in 1995, the state's Division of Medical Services required participating health plans in the St. Louis area to assume responsibility for all medically necessary transportation for their Medicaid members. Each of the six managed care organizations (MCOs) serving in St. Louis have since contracted with a private transportation broker, Medical Transportation Management (MTM) to coordinate all of their non-emergency medical transportation. As a broker, MTM serves as a gatekeeper for transportation services offered by each participating health plan. MTM operates a common call center for members of all six MCOs, scheduling trips to various medical destinations with a network of 40 local transportation providers, including taxis, local public transit systems and nonprofit agencies.
• Strengths	Hiring one broker to coordinate all non-emergency medical transportation in the St. Louis area has allowed local health plans to "pool resources with a single contractor. MTM's quality assurance program has helped to raise overall service quality of approved medical transportation providers in the metro area, and the addition of public transit agencies and other lower cost providers into MTM's network has helped to make more efficient use of existing transportation resources. Finally, by capitating payments to a broker, health plans are able to have some control and cost certainty over their medical transportation outlays.
• Barriers	Lack of coordination between transportation services provided to the Medicaid managed care and fee-for-service populations. Potential for the development of a two-tiered medical transportation system, one serving younger, more ambulatory plan members, the other designed for an older, frailer and more disabled fee-for-service Medicaid population.

10. LOCAL PUBLIC TRANSPORTATAION SERVICES: INVENTORY AND OVERVIEW

10.1 PUBLIC MASS TRANSPORTATION SERVICE PROFILES

The project team obtained data and information from individual transit operator Short Range Transit Plans (SRTPs), and printed schedules available to the public at customer service outlets and/or via the Internet. Operating costs, revenues and one-way passenger trip information are taken from transit operator Short Range Transit Plan tables for FY 2004 estimated/planned statistics.

Public mass transportation service is provided by six transit operators and agencies operating in the five study areas:

- San Bernardino Urban Area – Omnitrans provides fixed route bus, ADA and demand response services
- Jurupa Area – RTA provides fixed route bus and demand response services
- Pass Area – RTA provides fixed route bus and inter-city ADA demand response service; the cities of Banning and Beaumont have separate systems with each city operating fixed route bus and demand response service to seniors and persons with disabilities
- Barstow Area – Barstow Area Transit provides fixed route bus and demand response services
- Victor Valley Area – Victor Valley Transit Authority provides fixed route bus and ADA demand response service.

A summary of transit operator/agency operating costs, passengers and fleet statistics are shown below in Table 10-1a.

Table 10-1a
SUMMARY OF LOCAL PUBLIC MASS TRANSPORTATION RESOURCES

Organization & Type of Service	Operating Budget	Estimated One-Way Passenger Trips	Estimated Cost Per Passenger Trip	Fleet Requirements
Omnitrans Fixed Route Bus and OmniLink Services	$ 47,894,000	16,500,000	$ 2.90	175
Access Services	$ 8,453,000	445,500	$ 18.97	100
Omnitrans	**$ 56,347,000**	**16,945,500**	**$ 3.33**	**275**
Riverside Transit Agency Fixed Route Bus Service	$ 26,240,390	7,378,860	$ 3.56	125
ADA Services	$ 5,046,460	284,010	$ 17.77	54
Riverside Transit Agency	**$ 31,286,850**	**7,662,870**	**$ 4.08**	**179**
City of Banning Fixed Route Bus	$ 494,350	203,180	$ 2.43	5
Demand Response	$ 99,590	10,000	$ 9.96	3
City of Banning	**$ 593,940**	**213,180**	**$ 2.79**	**8**
City of Beaumont Fixed Route Bus Service	$ 165,000	35,000	$ 4.71	2
Demand Response	$ 355,000	35,000	$ 10.14	6
City of Beaumont	**$ 520,000**	**70,000**	**$ 7.43**	**8**
Barstow Area Transit	**$ 1,717,300**	**201,200**	**$ 8.54**	**19**
Victor Valley Transit Authority Fixed Route Bus Service	$ 4,804,045	975,000	$ 4.93	30
Demand Response	$ 2,071,080	105,000	$ 19.72	34
Victor Valley Transit Authority	**$ 6,875,125**	**1,080,000**	**$ 6.37**	**64**

In FY 2004, the six organizations providing public transportation service in the five study areas planned to expend over $97 million on transit, designed to serve an estimated 26 million in annual one-way passenger trips. A fleet of over 550 vehicles is used to provide this service. An estimate of how many of these trips are related to non-emergency medical trip purposes is not available for fixed route bus service.

An attempt was made to quantify the percentage of total demand response trips that are related to non-emergency medical trips. Transit operators providing demand response services were asked to provide a sample of trip level data so that the number of non-emergency medical transportation trips might be assessed.

Location files showing medical, hospital, and doctor addresses were matched to trip records for a two to four week period in either October or November 2003. Data from driver trip logs was reviewed and tabulated manually for all organizations except for Omnitrans, which provided trip and location files in electronic format. Table 10-1b below summarizes the type of data and

number of observations for each demand response service provider, and the estimated percentage of demand response trips whose trip purpose is related to non-emergency medical service. *The percentage figures developed are for those trips that either start or end in one of the five study areas and have a health service related facility at one end of the trip. These trips are shown as a percentage of all trips provided in the sample.* NET trips as a percentage of all trips starting and/or ending in the study areas is higher.

Table 10-1b
DEMAND RESPONSE TRIP-LEVEL DATA AND ESTIMATED NON-EMERGENCY MEDICAL TRIPS

Organization & Demand Response Services In Selected Zip Code Areas	Sample Size	Period of Time	Percentage of Total Trips for NET
Omnitrans			
East Valley Access Service	10,289	October 1-14, 2003	18.0%
West Valley Access Service	10,311		0.8%
Colton/Grand Terrace OmniLink Service	365		0.8%
Riverside Transit Agency			
Communities of Glen Avon, Rubidoux, Mira Loma (Jurupa Area)	50	October 1-15, 2003	NA
City of Banning	397	October 1-14, 2003	19.9%
City of Beaumont	1,375	October 1-14, 2003	3.9%
Barstow Area Transit	2,829	October 1-15, 2003	9.3%
Victor Valley Transit Authority	1,101	November 2003	28.9%

The following provides an overview of the six public transportation organizations that provide service in the five study areas.

10.1.1 San Bernardino Urban Area

Mass transportation services in the San Bernardino Urban Area are provided by Omnitrans, the largest transit operator in San Bernardino County. Services provided include both fixed route bus and demand response service. Omnitrans provides two types of demand response service. Demand response service open to the general public is known as OmniLink service and is available in the Colton/Grand Terrace, Yucaipa, and Chino Hills areas. Only the first, Colton/Grand Terrace OmniLink Service, is in the San Bernardino Urban Area defined for this study. Omnitrans also provides demand response service to those who qualify for complementary paratransit service according to the Americans With Disabilities Act (ADA). Table 10-1c provides a summary of Omnitrans' fixed route and demand response services. Passenger revenues are 22.3 percent and Measure I revenues 8.2 percent of total operating revenues. Other sources of transportation funding are described in Section 11.

Table 10-1c
OMNITRANS PROFILE

CHARACTERISTICS	FIXED ROUTE BUS	DEMAND RESPONSE
Program Clientele & Eligibility	Fixed route bus service is open to the general public. Anyone paying the appropriate fare (i.e., $1.15 adult cash $0.50 senior/disabled cash fare) may ride.	Access service is available to persons who have been pre-certified as eligible for ADA service. OmniLink service is open to the general public. Approximately 9.1% of all demand response trips are related to medical trips. Access fare is $2.05 to $4.30 depending on trip length. OmniLink service is $2.50 adult cash and $1.25 for seniors/disabled.
Organizational Structure	Omnitrans directly operates the majority of fixed route services that it provides. Selected routes are contracted. Omnitrans is responsible for service planning and marketing of all routes. A private company operates and maintains the vehicles used on the contracted routes.	Omnitrans contracts for provision of all demand response service. Omnitrans is responsible for determining eligibility. The contractor is responsible for reservations, scheduling, dispatch, and operations.
Service Area	Omnitrans operates throughout the urban area of San Bernardino County, serving many medical facilities, as shown on the map that follows.	Omnitrans' Access service is provided in six zones. OmniLink service is provided in the Colton/Grand Terrace area as shown on the map that follows.
Days and Hours of Service	Days and hours of service differ by route. In general, service is available Monday - Friday from 4:30 a.m. to 11:00 p.m. Weekend service is provided on a majority of routes from 6:30 a.m. to 7:30 p.m.	Access service operates Monday-Friday 4:00 a.m. to 11:00 p.m. Weekends from 7:00 a.m. to 7:00 p.m. OmniLink service operates Monday-Friday 7:00 a.m. to 6:00 p.m., Saturday 7:30 a.m. to 5:30 p.m. and Sunday 8:00 a.m. to 2:00 p.m.
Size of Program	Omnitrans has an annual operating budget of $47.9 million to provide an estimated 16.5 million one-way passenger trips in FY 2004. Omnitrans owns a fleet of 175 buses for fixed route service.	Omnitrans has an annual operating budget for Access service of $8.5 million to provide an estimated 0.5 million one-way passenger trips in FY 2004. Omnitrans owns a fleet of 100 vehicles for demand response service.

10.1.2 Jurupa Area

Mass transportation service in the Jurupa Area is provided by the Riverside Transit Agency (RTA), the largest transit operator in Riverside County. Services provided include both fixed route bus and demand response service for seniors (i.e., aged 60+) and persons who qualify for complementary paratransit service according to the Americans With Disabilities Act (ADA). RTA has six bus routes serving the Jurupa Area (i.e., Jurupa Shuttle, Route 38, Route 49, Route 21, Route 204 and Route 290. Table 10-1d provides a profile of RTA. Statistics are for the entire system by mode. Passenger revenues are 19.9 percent of total operating revenues. Other sources of transportation funding are described in Section 11.

Table 10-1d
RIVERSIDE TRANSIT AGENCY PROFILE

CHARACTERISTICS	FIXED ROUTE BUS	DEMAND RESPONSE
Program Clientele & Eligibility	Fixed route bus service is open to the general public. Anyone paying the appropriate fare (i.e., $1.00 adult cash $0.50 senior/disabled cash fare) may ride.	Seniors 60+ and persons who have been pre-certified as eligible for ADA service for use RTA demand response service for a fare of $1.50 per one-way trip.
Organizational Structure	RTA directly operates the majority of fixed route services. Selected routes are contracted. RTA is responsible for planning and marketing of all routes.	RTA is responsible for determining eligibility, reservations and scheduling. Service operations and vehicle maintenance are contracted.
Service Area	RTA operates throughout the western portion of Riverside County, serving major medical facilities, as shown on the map that follows.	RTA ADA service is provided within ¾ of a mile of fixed route bus service and includes a number of Intercity ADA service routes.
Days and Hours of Service	Days and hours of service differ by route. In general, service is available Monday - Friday from 4:30 a.m. to 10:15 p.m. Weekend service is provided on a limited number of bus routes from 6:00 a.m. to 7:30 p.m. in the Jurupa and Pass Areas	ADA service operates Monday-Friday 5:00 a.m. to 10:00 p.m. Saturdays from 6:00 a.m. to 7:30 p.m. and Sunday from 6:00 a.m. to 9:30 p.m.
Size of Program	RTA has an annual operating budget of $26.2 million to provide an estimated 7.4 million one-way passenger trips in FY 2004. RTA owns a fleet of 125 buses for fixed route service.	RTA has an annual operating budget for ADA service of $5.0 million to provide an estimated 0.3 million one-way passenger trips in FY 2004. RTA owns a fleet of 54 vehicles for demand response service.

10.1.3 Pass Area

Mass transportation services in the Pass Area are provided by three separate organizations. The City of Banning, the City of Beaumont, and the Riverside Transit Agency. All three organizations provide both fixed route bus and demand response services to seniors and persons with disabilities. All of the Banning and Beaumont fixed routes provide service to the San Gorgonio Hospital and RTA routes link the Banning/Beaumont area with Beaver Medical facilities in Yucaipa. However, the Beaver Medical facility will be moving to Redlands in the near future.

RTA operates three routes that serve the Pass Area, including Route 36, 35, and 31 as shown on the map for the fixed route bus services in the Pass Area. Intercity ADA service is also provided by RTA, connecting Banning and Beaumont with cities to the south (e.g., Perris, San Jacinto). Table 10-1d previously shown provides a profile of RTA services.

The City of Banning provides three fixed routes and a senior and disabled demand response service in the City and within ¾ mile of fixed route bus service. Table 10-1e provides a profile of the City of Banning transit service. Passenger revenues are 19.8 percent of total operating revenues.

Table 10-1e
CITY OF BANNING TRANSIT SERVICE PROFILE

CHARACTERISTICS	FIXED ROUTE BUS	DEMAND RESPONSE
Program Clientele & Eligibility	Fixed route bus service is open to the general public. Anyone paying the $0.50 fare may ride.	Persons who have been pre-certified as eligible for ADA service or seniors 60+ may use demand response service for a fare of $0.75 per one-way trip. Approximately 20% of all demand response trips are estimated to be for medical purposes.
Organizational Structure	The City operates all fixed route services.	The City is responsible for determining eligibility, reservations, scheduling, operations and vehicle maintenance.
Service Area	Two fixed routes serve the City and a third route connects to Cabazon. All routes meet at the San Gorgonio Hospital.	Demand response service is available within the City and ¾ of a mile of the Cabazon route. Demand response customers may transfer to City of Beaumont service at the San Gorgonio Hospital and RTA service at Kmart.
Days and Hours of Service	Service is available Monday - Friday from 6:00 a.m. to 7:00 p.m. Saturday service is provided from 8:00 a.m. to 5:00 p.m.	Demand response service operates Monday-Friday from 6:00 a.m. to 7:00 p.m. and on Saturdays from 8:00 a.m. to 5:00 p.m. for ADA certified persons. Seniors may use the service Monday-Friday from 9:00 a.m. to 3:00 p.m. and on Saturdays.
Size of Program	The City has an annual operating budget of $494 thousand to provide an estimated 203 thousand one-way passenger trips in FY 2004. The City owns a fleet of 5 buses for fixed route service.	The City has an annual operating budget of $100 thousand to provide an estimated 10 thousand one-way passenger trips in FY 2004. The City owns a fleet of 3 vehicles for demand response service.

The City of Beaumont also provides three fixed routes and a senior and disabled demand response service in the City and within ¾ mile of fixed route bus service. Table 10-1f that follows provides a profile of the City of Beaumont transit service. Passenger revenues are 14.4 percent of total operating revenues.

Table 10-1f
CITY OF BEAUMONT TRANSIT SERVICE PROFILE

CHARACTERISTICS	FIXED ROUTE BUS	DEMAND RESPONSE
Program Clientele & Eligibility	Fixed route bus service is open to the general public. Anyone paying the $0.50 fare may ride.	Persons who have been pre-certified as eligible for ADA service or seniors 60+ may use demand response service for a fare of $1.00 per one-way trip. Approximately 4% of all demand response trips are estimated to be for medical purposes.
Organizational Structure	The City operates all fixed route services.	The City is responsible for determining eligibility, reservations, scheduling, operations and vehicle maintenance.
Service Area	Three fixed routes serve the City. All routes meet at the San Gorgonio Hospital.	Demand response service is available within the City and ¾ of a mile of fixed routes. Demand response customers may transfer to City of Banning service at the San Gorgonio Hospital or RTA service at Kmart.
Days and Hours of Service	Service is available Monday – Saturday from 7:50 a.m. to 5:15 p.m.	Demand response service operates Monday-Saturday from 8:00 a.m. to 4:30 p.m.
Size of Program	The City has an annual operating budget of $165 thousand to provide an estimated 35 thousand one-way passenger trips in FY 2004. The City owns a fleet of 2 buses for fixed route service.	The City has an annual operating budget of $355 thousand to provide an estimated 35 thousand one-way passenger trips in FY 2004. The City owns a fleet of 6 vehicles for demand response service.

10.1.4 Barstow Area

Mass transportation service in the Barstow Area is provided by the Barstow Area Transit Agency (BAT). Services provided include both fixed route bus and demand response service in an area covering 653 square miles. Three fixed bus routes operated Monday-Saturday in the City of Barstow.

BAT also operates demand response service which is restricted to persons who qualify for complementary paratransit service according to the Americans With Disabilities Act (ADA) or to the general public at times that fixed route bus service does not operate (i.e., Monday-Friday before 6:00 a.m. or after 7:00 p.m. to 11:00 p.m. Monday-Saturday, Sundays from 9:00 a.m. to 11:30 p.m.). General public dial-a-ride service is also provided in three separate zones within a 12-mile radius of central Barstow. Although the City does not directly operate service to

Victorville or San Bernardino, it does offer roundtrip Greyhound tickets to Victorville available for purchase at City Hall at a cost of $9.00 each. The City is also working with Greyhound to offer roundtrip tickets to San Bernardino.

Table 10-1g provides a profile of BAT.

Table 10-1g
BARSTOW AREA TRANSIT PROFILE

CHARACTERISTICS	FIXED ROUTE BUS	DEMAND RESPONSE
Program Clientele & Eligibility	Fixed route bus service is open to the general public. Anyone paying the appropriate fare (i.e., $1.10 adult cash $0.55 senior/disabled cash fare) may ride.	Service to the general public is provided except for the City of Barstow when buses are operating. The fare ranges from $1.65 to $2.75 for adults paying cash and $0.85 to $1.30 for seniors/disabled based on zone.
Organizational Structure	BAT contracts for all service. City of Barstow staff is responsible for planning and marketing of all routes. The contractor operates and maintains all vehicles.	City staff is responsible for determining eligibility. Reservations, scheduling, dispatch, operations and maintenance are the responsibility of the contractor.
Service Area	Fixed route service operates within the City of Barstow and a portion of the County.	Demand response service operates within a 12-mile radius of central Barstow and serves a number of surrounding communities.
Days and Hours of Service	Service is available Monday - Friday from 7:00 a.m. to 7:00 p.m. Saturday service is from 9:00 a.m. to 7:00 p.m.	General public demand response service operates Monday-Friday 6:00 a.m. to 10:45 p.m. Saturdays from 8:00 a.m. to 10:45 p.m.
Size of Program	BAT has an annual operating budget of $1.7 million to provide an estimated 201 thousand one-way passenger trips in FY 2004. The City owns a fleet of 19 vehicles for all service.	

10.1.5 Victor Valley Area

Mass transportation services in the Victor Valley Area are provided by the Victor Valley Transit Authority (VVTA). Services provided include both fixed route bus and demand response service to those who qualify for complementary paratransit service according to the Americans With Disabilities Act (ADA). Table 10-1h provides a summary of VVTA's fixed route and demand response services. Passenger revenues are 15.9 percent and Measure I revenues 6.7 percent of total operating revenues. Other sources of transportation funding are described in Section 11.

Service between Victor Valley and the San Bernardino Urban Area is limited to two trips in the morning and four return trips in the evening. Mid-day service is not available. Thus, opportunities to receive transportation to medical services down the hill are limited.

Table 10-h
VICTOR VALLEY TRANSIT AUTHORITY PROFILE

CHARACTERISTICS	FIXED ROUTE BUS	DEMAND RESPONSE
Program Clientele & Eligibility	Fixed route bus service is open to the general public. The fare on County Routes (#21, #22 and #23) is $2.00 for adults and $1.00 for seniors/disabled. Other fixed routes in the urban area are $1.00 for adults and $0.50 for seniors/disabled.	Service is available to persons who have been pre-certified as eligible for ADA service. Approximately 28.9% of all demand response trips are related to medical trips. ADA Paratransit fares are $2.00 for Zone 1, $3.50 for Zone 2 and $5.00 for a three-zone trip.
Organizational Structure	VVTA contracts for service operations and vehicle maintenance with a private contractor and two cities. VVTA staff is responsible for service planning and marketing of all routes.	VVTA contractor staff determines eligibility for ADA service. A private contractor takes reservations, schedules trips, operates service and maintains demand response vehicles.
Service Area	VVTA operates throughout the urban area of Victor Valley as well as rural areas. VVTA also operates commuter express service trips to San Bernardino and Ontario.	Service is within the Cities of Adelanto, Victorville, Hesperia and Apple Valley, as well as ¾ of a mile of all fixed route bus service.
Days and Hours of Service	Commuter express service operates weekdays only during peak periods in peak direction only. Other fixed route services generally operate from 6:00 a.m. to 10:00 p.m. Monday-Friday and from 7:00 a.m. to 8:00 p.m. on Saturdays.	Service operates Monday-Friday from 6:00 a.m. to 9:00 p.m. and Saturday from 7:00 a.m. to 8:00 p.m.
Size of Program	VVTA has an annual operating budget of $4.8 million to provide an estimated 1.0 million one-way passenger trips in FY 2004. VVTA owns a fleet of 30 buses for fixed route service.	Demand response service has an operating budget of $2.1 million to provide an estimated 0.1 million one-way passenger trips in FY 2004. VVTA owns a fleet of 34 vehicles for demand response service.

Summary of Findings and Conclusions

Transportation service within each study area includes both fixed route bus and demand response services and is designed to meet the majority of travel needs within an area. Fixed route service is provided within ¼ mile of the majority of households in each area, is open to the general public on days and at times when the majority of non-emergency medical appointments are scheduled (i.e., weekday business hours), and serves major medical facilities in the area. Fixed route transportation costs per passenger trip range from a low of $2.43 for Banning to a high of $4.93 for Victor Valley.

Demand response services are also provided in each study area, but with restrictions on eligibility in all but the Barstow area. In the Barstow area, demand response services are available to the general public in areas and on days and at times when fixed route services are not available. Demand response service in other areas is limited to seniors, persons with disabilities or those certified as eligible for ADA paratransit service. Eligible individuals may request curb-to-curb service to get to and from destinations within the individual areas. If you do not meet these requirements, then your only public transportation option is fixed route bus service. Demand response transportation costs per passenger trip range from a low of $9.96 for Banning to a high of $19.72 for Victor Valley.

Public mass transportation service between an individual study area and medical facilities outside that area are limited at best and require customer significant inconvenience to make these longer trips (e.g., long travel times, multiple transfers required, long wait times between transfers, multiple fares on multiple carriers).

In general, medical facilities in the urbanized area of San Bernardino are well served by public mass transportation. The Jurupa and Pass Areas have limited options to access medical facilities outside their respective areas. The Barstow and Victory Valley areas do not have public transportation options to medical facilities outside their respective areas. A summary of public transportation service by area relative to medical facilities both within and outside the area follows.

- *San Bernardino Area.* The San Bernardino urbanized area is different from the other study areas in that most major medical facilities exist within the study areas may be accessed by public transportation – fixed route bus service for the general public, or demand response service for those eligible for ADA paratransit service. Transfers, however, may still be required if accessing the service by fixed route bus.

- *Jurupa Area*. The Jurupa Area is low density residential and persons requiring medical services must travel outside the area. The RTA provides fixed route bus service between Jurupa and downtown Riverside and the Galleria at Tyler, where customers may transfer to other RTA routes serving medical facilities such as Kaiser, Parkview, Riverside Community and Riverside Medical. Customers may also transfer in downtown Riverside to RTA Route 25 for service to the Loma Linda Medical Center and VA Hospital. Because of the low-density residential land use patterns in the Jurupa Area, bus service headways tend to be 45-minutes or more and coverage is limited requiring that individuals using bus service wait longer and walk further for the bus service. Customers may make a reservation for a deviated pick-up within ½ mile of the new Jurupa Shuttle and get dropped at bus stop connecting to a route going downtown. Direct ADA paratransit service from the Jurupa Area to medical facilities in Riverside is available to those persons with disabilities who are unable to use fixed route bus service.

- *Pass Area.* The Pass Area has a number of medical facilities that are served by City of Banning and City of Beaumont municipal fixed route bus service. Transfers between the two municipal systems may be made at the San Gorgonio Hospital. In addition, the RTA provides bus service between the Pass Area and San Jacinto/Hemet (Route 31 with service every 45-minutes), Moreno Valley (Route 35 with service every 90+ minutes) and Yucaipa (Route 36 with service every 60-minutes). Route 36 Yucaipa serves Beaver Medical. Transferring in Moreno Valley to get to service to medical facilities in Riverside and then returning home would be an all-day endeavor. ADA Intercity paratransit service is provided by RTA between the Pass Area and Downtown Riverside.

- *Barstow Area.* The Barstow Area Transit agency provides fixed route bus service in the City of Barstow and general public demand response service within a 12-mile radius of the City of Barstow. Medical facilities in the area are served. Public transportation service to Victor Valley and the urbanized area of San Bernardino does not exist.

- *Victor Valley Area*. The Victory Valley Transit Authority provides fixed route bus and ADA paratransit service within Victor Valley, serving most medical facilities on 60-minutes or less service frequency. Travel to destinations outside the area is limited to three early morning trips to Ontario and Rancho Cucamonga and four return trips in the evening.

11. PUBLIC TRANSPORTATION FUNDING

11.1 PUBLIC TRANSPORTATION FUNDING IN THE TWO COUNTIES

The two local County Transportation Commissions – the San Bernardino Associated Governments (SANBAG) and the Riverside County Transportation Commission (RCTC) program and allocate local public transportation funding to support the operation of public transportation services and specialized transportation programs in the Inland Empire. This section identifies and describes the funding resources for the six public transportation organizations profiled in Section 10 of this report, and describes local specialized transportation funding programs.

11.1.1 Summary of Operating Revenues by County

The six organizations providing public transportation service in the five study areas are Omnitrans, the Riverside Transit Agency (RTA), Victor Valley Transit Authority (VVTA), and the Cities of Barstow, Banning, and Beaumont. Public mass transportation services operated by these organizations include general public fixed route bus service to medical facilities, as well as paratransit services. Typically, these agencies use a "mix" of farebox revenues and other transit subsidies for provision of general public, ADA and other specialized senior and disabled services. Information on funding sources for FY 2004 was obtained from transit operator Short Range Transit Plan documents. Additional details on revenues by source for individual transit operating agencies and case studies for the SANBAG and RCTC specialized transit programs are discussed later in this section.

In FY 2004, the six transit agencies providing service to the five areas included in this study budgeted over $101 million in transit operating revenues. Omnitrans, Barstow and Victor Valley transit operators (all in San Bernardino County) budgeted $65 million with an operating ratio of 22.6 percent. RTA, and the Cities of Banning and Beaumont (all in Riverside County) budgeted

$36 million with an operating ratio of 18 percent in FY 2004, as shown in Table 11-1a below. Details by operating agency follow.

Table 11-1a
SUMMARY OF FY 2004 TRANSIT OPERATING FUNDS FOR SERVICE PROVIDERS IN SAN BERNARDINO AND RIVERSIDE COUNTIES

Transportation Funding for Operations FY 2004	San Bernardino County	Riverside County	Total Agencies In Study Areas
Passenger Revenue	$ 13,839,500	$ 6,423,033	$ 20,262,533
Other Operating Revenue	$ 885,000	$ 75,000	$ 960,000
Local Sales Tax Revenue	$ 5,212,890	$ -	$ 5,212,890
Local Transportation Funds	$ 42,552,607	$ 25,953,890	$ 68,506,497
Other Local Funds	$ 1,441,140	$ -	$ 1,441,140
Federal Transit Administration Funds	$ 246,206	$ 3,591,565	$ 3,837,771
Congestion Mitigation & Air Quality Funds (CMAQ)	$ 838,462	$ -	$ 838,462
Total Operating Revenue	$ 65,015,805	$ 36,043,488	$ 101,059,293

The Local Transportation Fund (LTF) is the largest revenue source for transit operations, followed by passenger revenue. Revenues in the LTF are derived from a ¼ cent retail sales tax collected statewide and returned by the State Board of Equalization to each county according to the amount of tax collected in that county. Revenues apportioned in FY 2004 by county are as follows.

- San Bernardino County apportioned $50.8 million in LTF funds available for public transportation projects. $37.6 million was apportioned to the San Bernardino Urban Valley area, $0.6 million to Barstow, and over $6.0 million to jurisdictions in the Victor Valley area.

- Riverside County apportioned $49.9 million in LTF funds available public transportation projects. $30.8 million was apportioned to non-rail transit projects in Western Riverside County.

Details of funding sources by transit operating agency are shown in Table 11-1b for San Bernardino County and Table 11-1c for Riverside County.

Table 11-1b
FY 2004 TRANSIT OPERATING FUNDS FOR SERVICE PROVIDERS IN SAN *BERNARDINO* COUNTY

Transportation Funding for Operations FY 2004	Omnitrans	Barstow Area Transit	Victor Valley Transit Authority	Subtotal San Bernardino County
Passenger Revenue	$ 12,539,000	$ 210,000	$ 1,090,500	$ 13,839,500
Other Operating Revenue	$ 735,000	$ 8,000	$ 142,000	$ 885,000
Local Sales Tax Revenue	$ 4,611,000	$ 144,290	$ 457,600	$ 5,212,890
Local Transportation Funds	$ 36,662,000	$ 1,222,050	$ 4,668,557	$ 42,552,607
Other Local Funds	$ -	$ 1,366,340	$ 74,800	$ 1,441,140
Federal Transit Administration Funds	$ -	$ 133,000	$ 113,206	$ 246,206
Congestion Mitigation & Air Quality Funds (CMAQ)	$ 510,000	$ -	$ 328,462	$ 838,462
Total Operating Revenue	**$ 55,057,000**	**$ 3,083,680**	**$ 6,875,125**	**$ 65,015,805**

Table 11-1c
FY 2004 TRANSIT OPERATING FUNDS FOR SERVICE PROVIDERS IN RIVERSIDE COUNTY

Transportation Funding for Operations FY 2004	Riverside Transit Agency	City of Banning	City of Beaumont	Subtotal Riverside County
Passenger Revenue	$ 6,230,385	$ 117,648	$ 75,000	$ 6,423,033
Other Operating Revenue	$ 75,000	$ -	$ -	$ 75,000
Local Sales Tax Revenue	$ -	$ -	$ -	$ -
Local Transportation Funds	$ 24,716,305	$ 792,585	$ 445,000	$ 25,953,890
Other Local Funds	$ -	$ -	$ -	$ -
Federal Transit Administration Funds	$ 3,591,565	$ -	$ -	$ 3,591,565
Congestion Mitigation & Air Quality Funds (CMAQ)	$ -	$ -	$ -	$ -
Total Operating Revenue	**$ 34,613,255**	**$ 910,233**	**$ 520,000**	**$ 36,043,488**

11.1.2 Specialized Transportation Funding

Both SANBAG and RCTC have specialized transportation programs funded from local sales tax revenues that have been created in lieu of TDA Article 4.5 Community Transit programs. Interviews were conducted in November and December of 2003 with SANBAG and RCTC representatives to discuss available funding and specialized transportation funding programs. Revenue forecasts, program guidelines, and other information about specialized transportation programs were collected and reviewed. Summary results for FY 2004 include:

- SANBAG's Elderly & Handicapped Program is approximately six percent of local sales tax for special transportation needs, including fare subsidies for persons with specialized needs (seniors and disabled) who wish to utilize public transit services (both fixed route and paratransit). At the time of interviews, SANBAG was in the process of reviewing guidelines and policies for this program and has since proposed changes in the percent amount and types of eligible projects included as part of the Measure I Reauthorization Expenditure Plan. In FY 2004, SANBAG allocated $4.6 million in Measure I funds (Local Sales Tax Revenue) to the Valley Elderly Fund.

- RCTC's Specialized Transportation Program includes projects such as the mileage reimbursement program known as the Transportation Reimbursement and Information Project (TRIP) program and the Transportation Access Program (TAP) that funds subsidized transit tickets that are distributed by social service agencies. In FY 2004, RCTC implemented a Taxi Demonstration Project in cooperation with RTA and other transit operators in Western Riverside County. In FY 2004, RCTC allocated $1.8 million in Western Riverside County Measure A funds (Local Sales Tax Revenue) for specialized transportation, including funds for the new Taxi Dial-A-Ride Demonstration project.

11.1.3 San Bernardino County Funding

Measure I is the half-cent sales tax collected throughout San Bernardino County for transportation programs and projects. Funds are apportioned to local jurisdiction by area. In the Mountain/Desert Area, approximately five percent of Measure I funds are used for public transit specialized funding, compared to about six percent in the Valley. Table 11-1d provides a summary of the Measure I Elderly & Handicapped Expenditure Program.

Measure I was reauthorized by the voters in November 2004. The proposed expenditure plan for Measure I calls for a two percent increase in the amount of funds available for the Elderly and Handicapped Transit program, with up to 7.5% increase in the Victor Valley, and up to 5% elsewhere.

Table 11-1d
SAN BERNARDINO COUNTY MEASURE I ELDERLY AND HANDICAPPED PROGRAM CASE STUDY

CHARACTERISTICS	DESCRIPTION
Funding Source	Local Sales Tax (Measure I) for Public Transportation
Program Description	Measure I is the half-cent sales tax collected throughout San Bernardino County for Transportation Projects. Each year, SANBAG distributes a percentage of funds for Elderly & Handicapped Transit Programs.
(a) Purpose	The purpose of the Elderly & Handicapped Transit program according to the ordinance is, "funds in this category shall be expended annually for a program of reduced fares and enhanced services for elderly and handicapped transit users, to be developed by the Authority in cooperation with transit service agencies."
(b) Eligible Activities	Measure I Elderly & Handicapped Transit program funds may be used to: (1) Stabilize or subsidizes fares for seniors and persons with disabilities; (2) Support new, expanded, improved, or enhanced transportation service to seniors and persons with disabilities; (3) Support social service agency and city-related transportation for seniors and persons with disabilities; and (4) Support senior and persons with disabilities transportation education and marketing.
Administration & Funding	Measure I funds are allocated by SANBAG based on adopted SANBAG Board Polices. Measure I Elderly & Handicapped Transit Funds are administered by the Transit Programs section of SANBAG. The Public and Special Transportation Advisory and Coordinating Council (PASTACC) provides input in development of policies.
(a) Funding Levels	In FY 2004, $4.6 million was budgeted for Valley projects including funds to : (1) Monitor performance of Measure I funding contractor; (2) Process payment requests to transit operators and contractor; and (3) Allow a specified number of scholarships to the Pepperdine University Transit and Paratransit Management Program. Funds to transit operators are used to subsidize the senior and disabled fares (i.e., $0.25 per boarding fixed route and $0.05 Dial-A-Ride) and include a direct subsidy for the operation of the ADA complementary paratransit service.
(b) Matching Requirements	Measure I Elderly and Handicapped Transit funds may not be used to supplant existing federal, state and local (LTF) funds committed to transit services. SANBAG Board Policy specifies how Maintenance of Effort shall be determined and exceptions when all LTF apportionments are used for transit purposes.
Program Strengths	Targets funds to existing programs and specific customers.
Program Barriers	The population is aging resulting in an increased demand such that demand exceeds available funds. More could be done with the education component and coordination of services offered by social service and public agencies. Increased use of bus passes by social service agencies if these agencies were better informed about available service.

11.1.4 Riverside County

Measure A is the half-cent sales tax collected throughout Riverside County for transportation projects. Funds are apportioned to program areas and to local jurisdictions and specific projects within program areas. Table 11-1e provides a summary of the Measure A Specialized Transit Program funds.

Table 11-1e
RIVERSIDE COUNTY SPECIALIZED TRANSIT PROGRAM CASE STUDY

CHARACTERISTICS	DESCRIPTION
Funding Source	Local Sales Tax (Measure A) for Public Transportation
Program Description (a) Purpose (b) Eligible Activities	Measure A is the half-cent sales tax collected throughout Riverside County for Transportation Projects. Every two-years, RCTC requests proposals for funding through the Measure A Specialized Transit Program. The purpose of the Specialized Transit Program is to provide seniors, persons with disabilities or the truly needy with transportation assistance. Transportation assistance translates into everything from mileage reimbursements to dial-a-ride services operated by city governments, transit agencies, and non-profit groups.
Administration & Funding	Measure A funds are administered by RCTC. Specific programs and projects are administered through partnering agreements with local organizations. For example, the TRIP program is administered by the Partnership to Preserve Independent Living for Seniors & Persons with Disabilities; the TAP program is administered by the Volunteer Center of Riverside County. The new taxi demonstration project is administered by DPI under contract to RCTC. In FY 2004, $2.8 million was available for programming in Western Riverside County over a two-year period, which includes $0.3 million in set-aside funds for local match of Section 5310 Federal capital grants for the purchase of equipment and vehicles for specialized transportation service. Between FY 1990 and FY 2002, $11.8 million was programmed in Specialized Transit Funds in Western Riverside County.
Program Strengths	Allows for innovative projects to be implemented and tested. The project grant approach allow local and community-based program ideas to receive equality in the fund allocation process.
Program Barriers	Fragmentation. It is hard for the customer to understand all of the program offers and various agencies providing the services. A customer may need to make several telephone calls before contacting the sponsoring agency of a particular program.

Table 11-1e
(Continued)

CHARACTERISTICS	DESCRIPTION
Innovative Projects	For 12 years, RCTC has been partnering with local organizations to find innovative solutions to special transportation challenges. Several of these innovative programs are highlighted. **Mobility Training** is travel training assistance for the disabled and visually impaired. This program began in FY 1998 and is sponsored by Blindness Support. The FY 2004 Measure A budget is $140,546. **Transportation Access Program (TAP)** is administered by the Volunteer Center of Riverside County. TAP distributes bus tickets to social service agencies, which then distribute those tickets to thousands of truly needy persons requiring access to medical appointments, job interviews or other needed services. This program began in FY 1994. The FY 2004 Measure A budget is $81,120. **Transportation Reimbursement & Information Project (TRIP)** provides information to seniors and persons with disabilities on the availability of transportation. It is a regional clearinghouse of public, private, and social service agency transportation services. TRIP also includes a mileage reimbursement program to volunteer drivers of people unable to use other transportation modes. Individuals are pre-qualified through an application process. The Partnership to Preserve Independent Living for Seniors and Persons with Disabilities has been administering this program since FY 1993. The FY 2004 Measure A budget is $265,450. **Jurupa Shuttle** operated by Transportation Specialists under contract to RTA provides for deviated fixed route service in the Jurupa Valley. Funding for FY 2004 is $198,351. **Inland Aids Project** is a non-profit organization that provides non-emergency transportation service to persons with HIV disease who are unable to utilize other forms of transportation. This program began receiving Measure A funding in FY 1995 and was previously identified in Section 4.1 of this report. The FY 2004 Measure A budget is $88,000. **Taxi Dial-A-Ride Demonstration Project** was begun in October 2003 and is scheduled to operate for a 12-month period, with an six-month evaluation. The project budget is approximately $700,000, which includes $612,826 to the RTA to reimburse private taxi companies that service overload demand on existing demand response services in Western Riverside County. DPI is the program administrator with a budget of $87,174. In January and February of 2003, RTA conducted a demonstration of using taxicabs to transport a limited number of paratransit customers. The average cost per trip of this demonstration service was $23.84 compared to $41.16 for RTA service.

Summary of Findings

- In FY 2004, the six public transportation agencies providing service in the five study areas budgeted more than $100 million in transit operating revenues, with another ten to 23 percent of transportation operating revenues coming from user fees or fares, depending on operating agency
- In FY 2004, SANBAG allocated five percent of local sales tax revenues to specialized transportation programs, with approximately $4.6 million allocated to the San Bernardino Valley area; the future of this revenue source will depend on voter approval in November 2004
- In FY 2004, RCTC allocated $1.8 million in local sales tax revenues for continuation and the start-up of specialized transportation programs in Western Riverside County, including: (1) the highly cost effective mileage reimbursement TRIP program; (2) the subsidized transit ticket or TAP program; and (3) the Taxi Demonstration Program

12. GIS ANALYSIS OF QUANTITATIVE STUDY ELEMENTS

The previous sections of this document have reported upon observations and findings from each project study task. Although each task was developed and refined within a conceptual matrix that took into consideration the other tasks, and overall study goals, the task report findings are written from the perspective of the information sources from which the data were drawn. In this section, however, the quantitative findings will be assessed simultaneously, and contrasted with qualitative results in order to provide a larger view of the issues related to consumer need, availability and access to non-emergency medical transportation.

In this section we will:

- Discuss quantitative findings based upon Geographic Information Systems (GIS) analysis of quantitative study elements;
- Consider observations and findings from different study tasks and determine where they converge and where they differ;
- Formulate a series of recommendations for projects and on-going work efforts within the study area.

The following section of the report presents the observations and findings from the quantitative study tasks, collectively viewed for the purposes of assisting the project team in the development of project recommendations.

12.1 OVERVIEW OF GIS ANALYSIS METHODOLOGY

The Geographic Information System (GIS) analytical effort included in this study occupies a dual role: it is at once an analytic tool and an end product of the study. In is an iterative process of theorizing, mapping, refining and re-theorizing, Key advantages of the GIS approach used on this project include providing the ability to:

- Identify and interpret large amounts of data;
- Organize interrelated variables into a spatial format; and
- Allow visual testing of potential scenarios

The GIS analysis of quantitative study data for this study included the following data sets:

- Census 2000 and MPO population data;
- Public transit and demand responsive services data including (routes, boundaries and service frequencies)
- IEHP member data
- Telephone survey results

It was necessary to first evaluate the value of the data relative to accomplishing study goals. This process involved reviewing and entering the data and finally messaging the integrated data sets in order to ascertain the story within. Data limitations issues impacting the analytical process are briefly discussed below.

12.1.1 Data Limitations

Recognizing that outcomes of the GIS analysis were strictly dependant upon the reliability and availability of the data used for analysis, the project team emphasized the need for data at the outset of the study to effectuate a comprehensive analysis. The issues related to data reliability and usability, in most cases, were ultimately resolved by the project team. However, the availability of, and access to quantitative data for analysis, specifically healthcare organization member and facilities data, as well as, missed appointment data was very limited. Therefore, the results of this analysis reflect only the findings arising from the telephone survey and the IEHP member and facilities data.

Zip Code Parameters

The study area focus was defined at the outset by the designation of five geographic areas within San Bernardino and Riverside counties. Defining the boundaries of the study areas was reasonable in terms of overall study planning and resource utilization. However, the geographic and zip code designations ultimately limited the analysis of IEHP member origins to only those in the study area. Moreover, to broaden the geographic parameters of analysis, the project team did incorporate medical facility destinations up to a 12-mile radius outside of study boundaries.

Healthcare Member Data Issues

Since IEHP was the only healthcare organization involved with the study to provide member (addresses, zip codes, etc.) and facilities data (facility location and medical specialties), the GIS analysis was limited only to their members.

Given that IEHP's member base is primarily comprised of low income families and those on Medi-Cal and Medicare the analysis was focused only on that segment of the overall population residing within the designated zip codes and being IEHP members. Therefore, this analysis may not fully reflect the entire picture of other segments of the population (e.g., seniors and disabled) and those individuals who are not Medi-Cal or Medicare. The unavailability of data from other healthcare organizations participating in the study severely constrained the project team's ability to conduct a broad-based analysis of consumer need for non-emergency medical transportation.

In addition, since missed appointment data (e.g. number of missed appointments and corresponding reasons) for IEHP was not available, there was no possibility of linking missed appointments due to lack of transportation specifically to their members. This made it necessary for the project team to develop GIS findings relative to IEHP members separately from GIS findings of the telephone survey, since telephone survey results reflected the perspectives of the general population relative to missed medical appointments.

Healthcare Facility Data Issues

Fixed route data provided to the project team was limited to the five study areas; therefore, proximity and service frequency to facility destinations outside these study areas could not be analyzed. Thus, only 37% (433 of 1,156) facilities were analyzed. This may have been particularly significant as it relates to the Jurupa and Beaumont/Banning study areas because a majority of medical trips originating from these areas were made to facility destinations outside the five study areas.

Transit Data Issues

The project team received and was able to incorporate fixed-route service-related data (e.g. routes and frequencies) from all public transit providers operating within the study area, and service area information for ADA and demand responsive services. However, we faced considerable challenges with regard to paper trip log records relative to trips made on demand-responsive services in the Riverside area. The project team received hundreds of paper documents with pick-up and drop-off points, some with zip codes and most without. The lack of zip codes made meaningful analysis impractical because the task to sort by geographic area (i.e., Jurupa) perform zip code identification and data entry in an effort to incorporate this data was both problematic and proved too cumbersome to accomplish. This precluded the project team's incorporation of this data for analysis.

Survey data

The telephone survey did ask respondents for zip code information. However, since the zip code areas in the study area encompass large geographic areas, many of the zip codes from an analytical standpoint, had too few interviews to have confidence in the data results (e.g. 92311 (Barstow) has 100 interviews, but 92411 (San Bernardino) only has 23 interviews. The survey also asked respondents for the nearest cross streets to their residence. However, only 500 of 1000 could be matched to actual street level map data. This was likely due to respondents providing inaccurate (misspelled) or incomplete information.

NEMT needs were ultimately analyzed by the project team by mapping and quantifying the relationships between segments of the population, public transit services and medical facilities.

12.2 GIS ANALYSIS RESULTS

12.2.1 Study Geographic Areas by Zip Code and Demographic Characteristics

The following five study areas were defined by selected zip codes as shown in Figure1 below:

- Banning/Beaumont
- Barstow
- Jurupa
- San Bernardino Valley (between Fontana and San Bernardino)
- Victor Valley (focusing on Adelanto, Apple Valley, Victorville, and Hesperia)

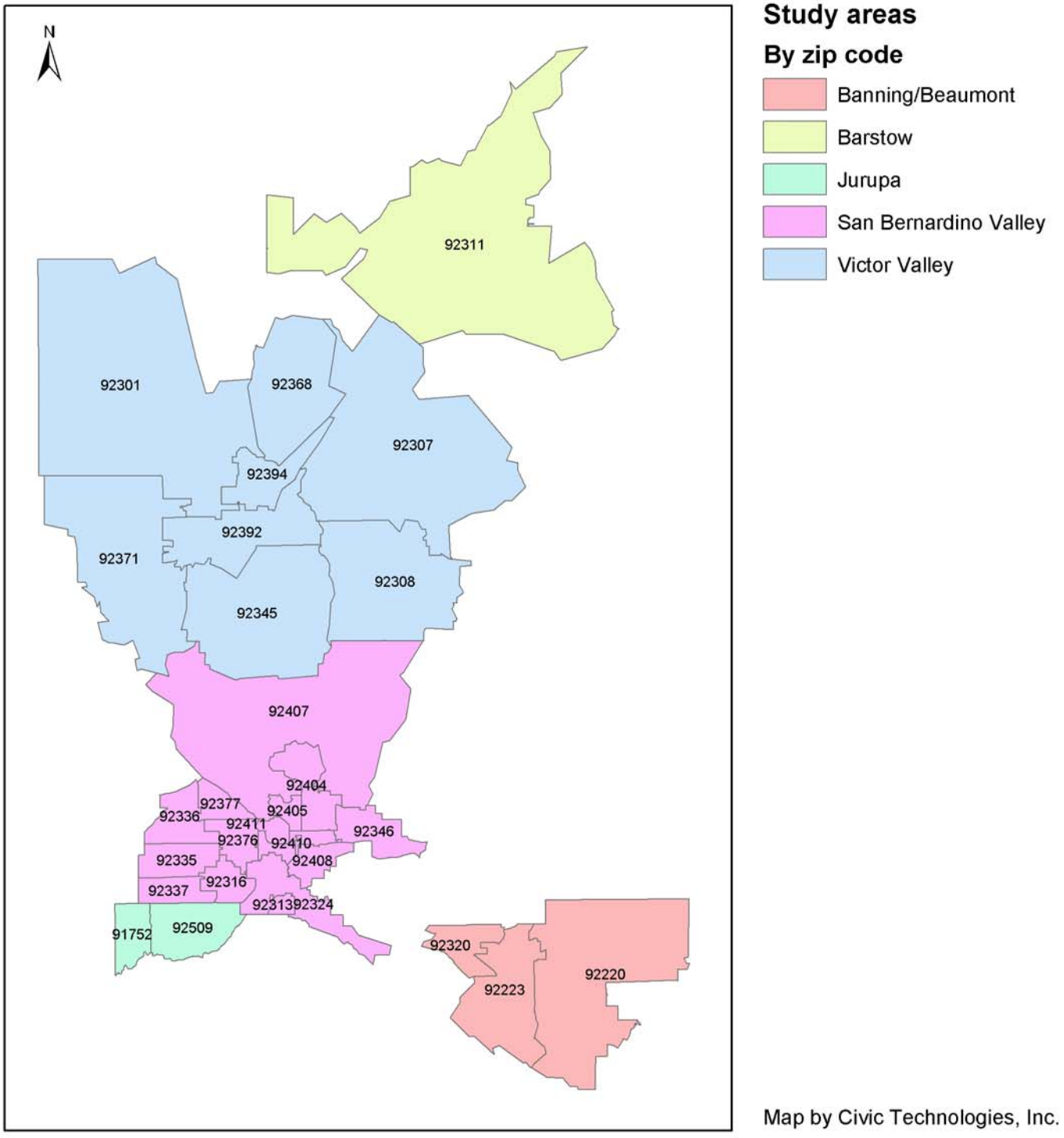
The total study area population demographic characteristics based upon Census 2000 are as follows:

- The five study areas have a total population of 1,032,249 with 311,775 households
- Of the five study areas, San Bernardino Valley has the largest population (61%) and households (58%)
- Approximately one third of the population in all five study areas are minors age 0 to 17 years old
- Of the five study areas, Beaumont/Banning has a significantly higher number of seniors age 65 and over (22%) than the other four areas (7% to 11%)
- All five study areas have large minority populations (39% to 70%) with San Bernardino valley having the largest. San Bernardino's Hispanic population represents 51% of the study area population
- Approximately one-quarter to one-third of households in all five study areas have incomes below $25K (27%-37%)
- Of the five study areas, Jurupa has the greatest number of high income households (21%) and Beaumont/Banning has the least (14%).
- 90%-93% of households in all five study areas have at least one car.

KEY DEMOGRAPHIC CHARACTERISTICS

	Percent of Total Study Area		Age		Race/Ethnicity		Income		Autoless
Study Area	Population	Households	Minors	Senior	Hispanic	All Minorities	Below $25K	Over $75K	Households
Barstow	3%	4%	31%	11%	35%	52%	34%	15%	10%
Beaumont/Banning	5%	6%	26%	22%	27%	39%	37%	14%	8%
Jurupa	8%	7%	34%	8%	49%	58%	27%	21%	8%
San Bernardino Valley	61%	58%	36%	7%	51%	70%	32%	18%	10%
Victor Valley	23%	25%	33%	11%	28%	41%	32%	16%	7%

Figure 1: Study Areas by Zip Code



12.2.2 IEHP Case Study

IEHP Data

IEHP provided 102,131 member records covering the period of October 1, 2002 to October 1, 2003. Of these, 98.13 % of addresses were geo-coded successfully (100,218 records generated). For quantifying members in relation to transit, only those within the five study areas were included. Member data included ethnicity, disability status, Medical/Medicare status, number and type of visits, and specialty visited.

In addition to member records, IEHP facility records were also provided to the project team covering the period of visits from October 1, 2002 to October 1, 2003. Of these, 92.57% addresses were geo-coded successfully (1,009 records). For quantifying facilities in relation to transit, only those within the five study areas were included (919 records).

Given that IEHP was the only healthcare organization that provided member and facilities data for use, the project team focused upon IEHP as somewhat of a case study. Although the data provided could not be analyzed relative to missed medical appointments, the project team was able to:

- Determine where the highest concentrations of members reside;
- Show where members receive medical services, as well as, correlate the frequency and types of visits made by members to facilities within the study area;
- Determine members' proximity from their home to public transportation;
- Determine the most frequently used facilities by members;
- Assess members' travel patterns to IEHP facilities within the study area; and
- Develop definitive demographic characteristics of IEHP members (IEHP profile segment) within the study area making the greatest number of trips to IEHP facilities for medical appointments

Where IEHP Members Reside Within the Study Area

Figure 2 plots IEHP members residing within the study area. Figure 3 shows the corresponding IEHP member densities within the study area. Both figures illustrate that the San Bernardino Valley geographic area has the largest number of IEHP members in residence, while the Barstow has the least. The highest concentrations of members are found around the urban centers of each study area with the highest densities in the City of San Bernardino.

Figure 2: IEHP Members within Study Areas

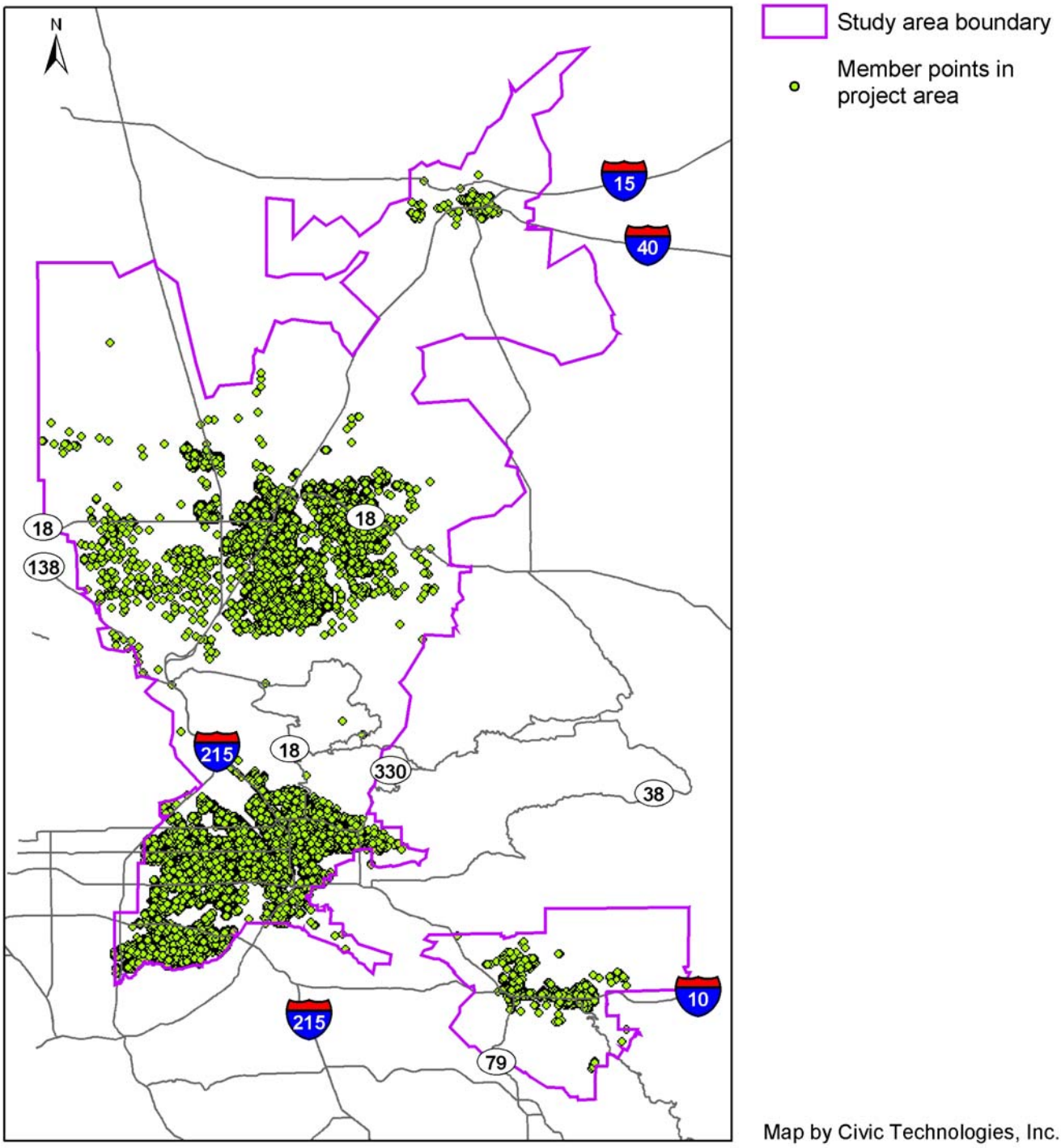
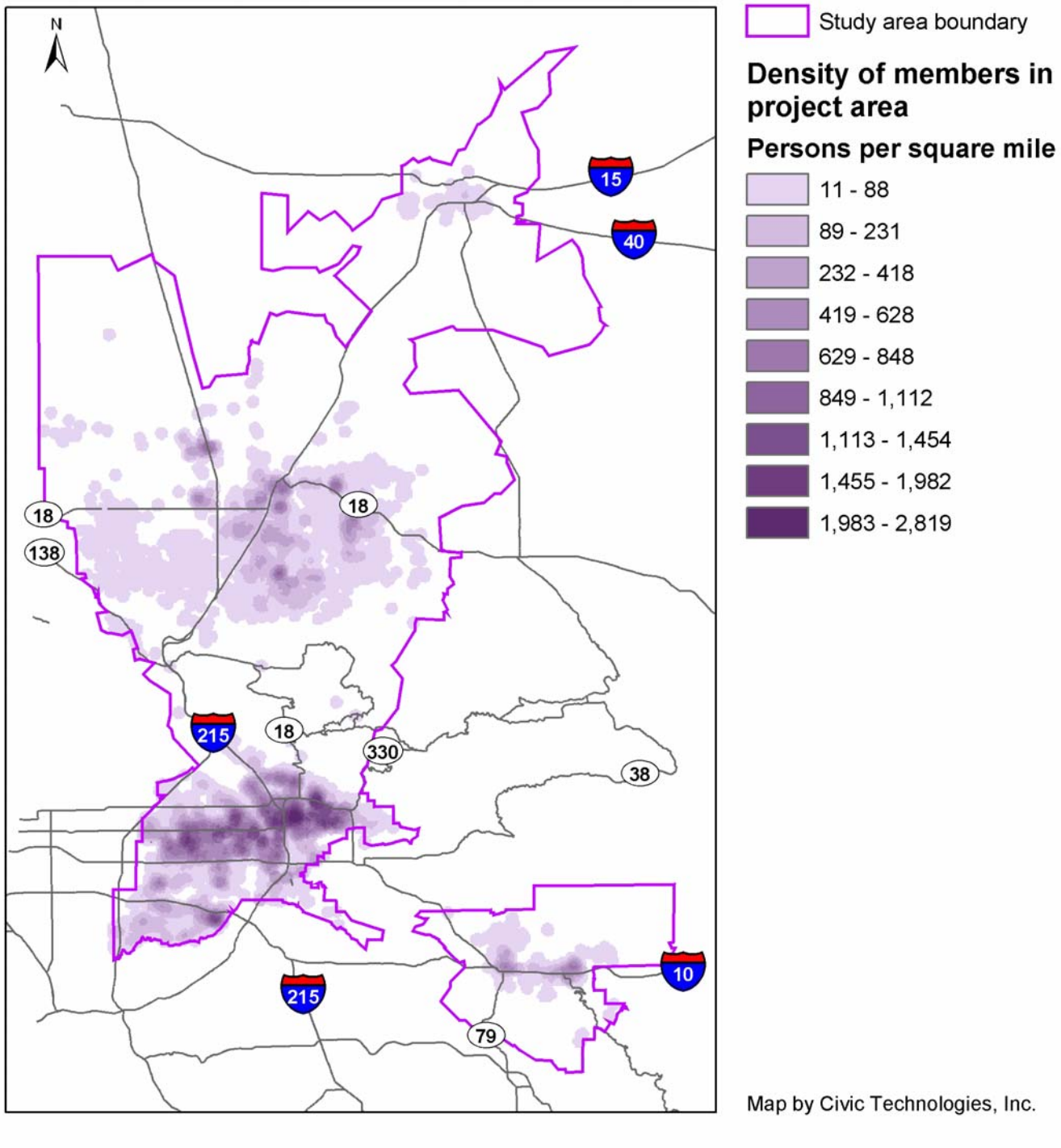


Figure 3: Density of IEHP Members in Study Areas

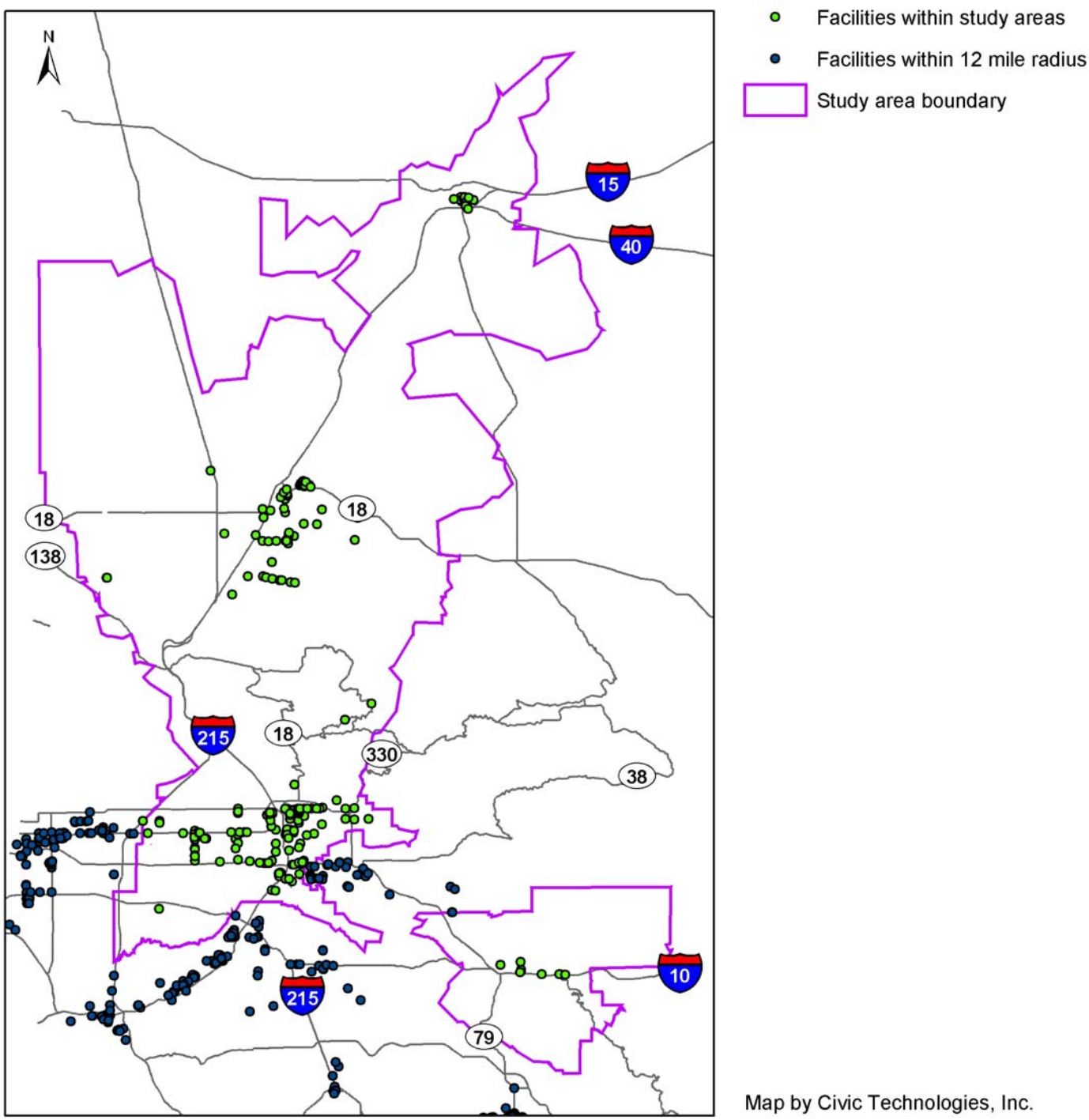


Location of IEHP Facilities in the Study Area

The project team mapped 919 IEHP facilities within 12 miles of each of the five study areas. Due to HIPPA restrictions, facility names were omitted in the original data submittal and only facility ID numbers and addresses were provided.

Figure 4 below shows that the San Bernardino Valley geographic area has the greatest number of healthcare facilities, followed by the Victor Valley geographic area. Jurupa and Banning/Beaumont have considerably fewer facilities.

Figure 4: Medical Facility Locations

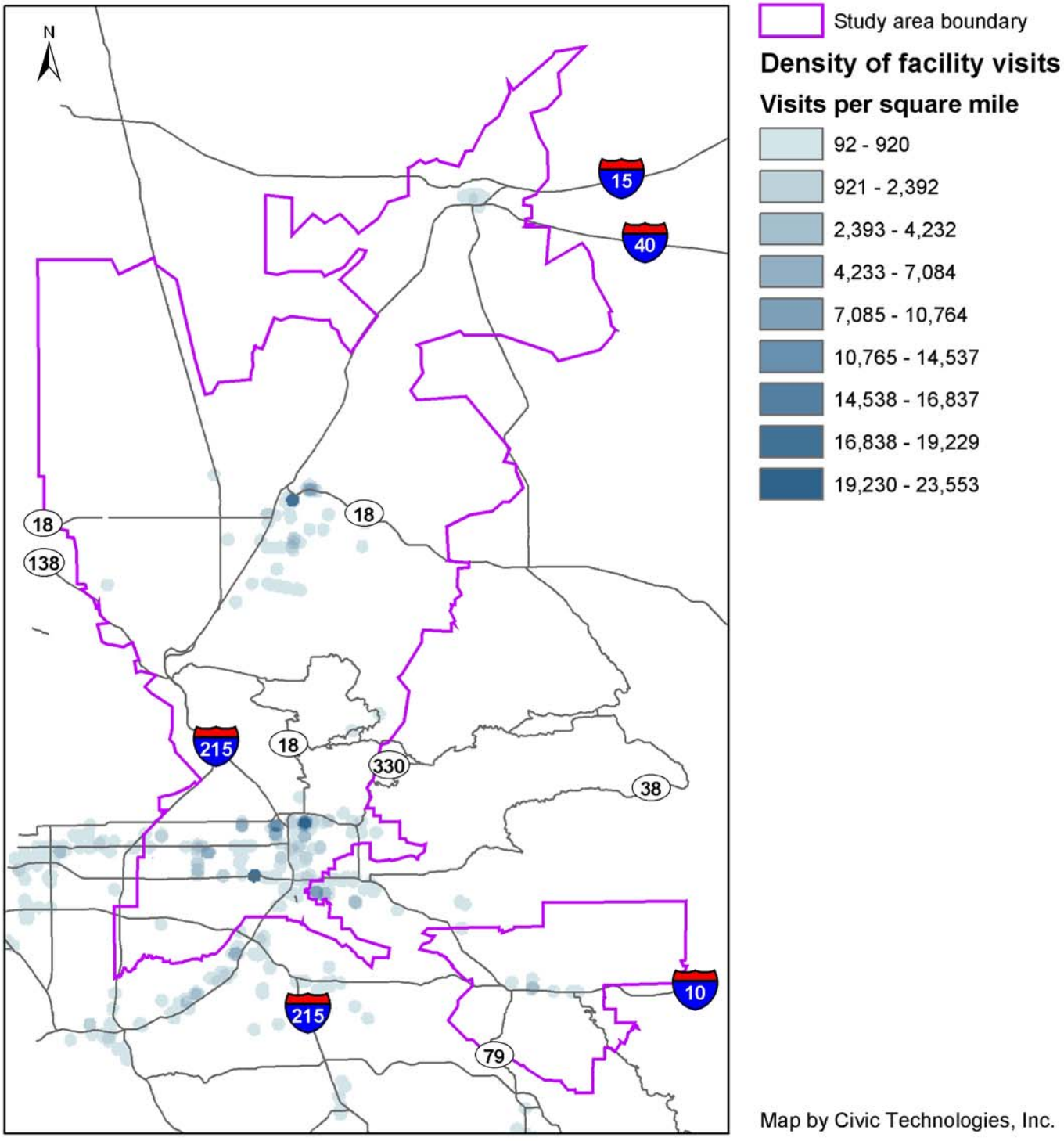


Frequency and Types of Medical Visits to Facilities in the Study Area

There were 111,346 visits made by IEHP members to the facilities shown above. The project team was able to successfully geo-code and map 95.93% of these visits at both their origins (i.e. member addresses) and destinations (i.e., facility addresses). Visit data included the number and type of visits. This analysis focused only on non-emergency medical visits.

Figure 5 shows that the San Bernardino Valley study area had the highest number of NEMT origins and destinations. Jurupa and Banning/Beaumont had the lowest concentration of NEMT destinations, with members traveling to other Riverside and San Bernardino locations for medical care. The data shows that the top three specialty visits for IEHP members were Pediatrics, OB/GYN and Vision Care.

Figure 5: Density of Facility Visits within 12 Miles of Study Area



Top Five Facilities Visited By IEHP Members

In order to determine which facilities generate the greatest demand, the five most visited IEHP facilities were identified by the project team. Four of the five are located in the San Bernardino Valley geographic area, which correspondingly has the greatest number of facilities. The number of visits made to these healthcare facilities were mapped by the project team by originating zip code. Figures 6 through 10 show the locations for each of these facilities and the number of trips being made by IEHP members to these facilities.

Figure 6: Top 1 Facility -- Arrowhead Regional Medical Center

400 N. Pepper Avenue, Colton, CA 92324

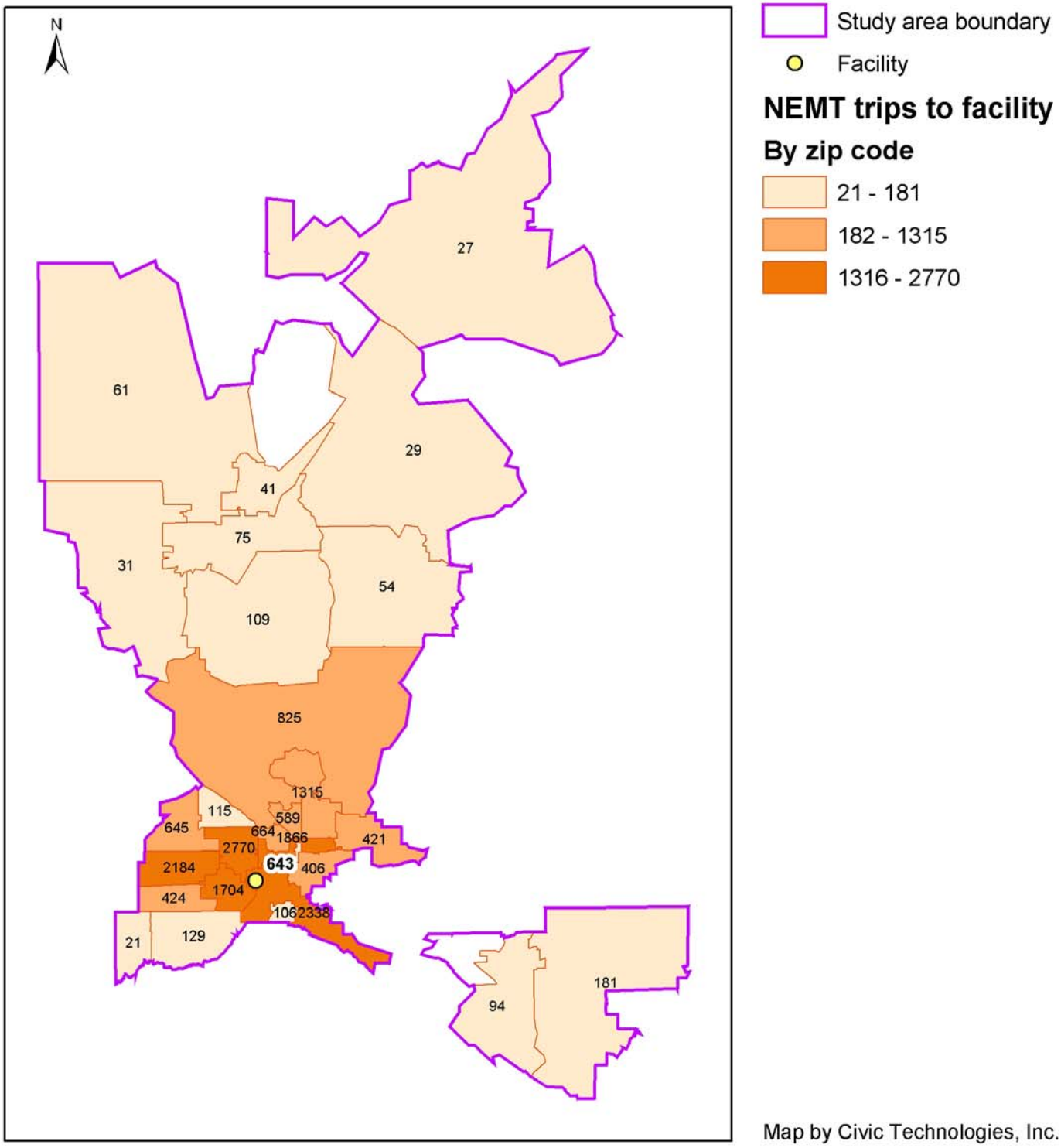


Figure 7: Top 2 -- Victor Valley Community Hospital

15248 Eleventh Street, Victorville, CA 92392

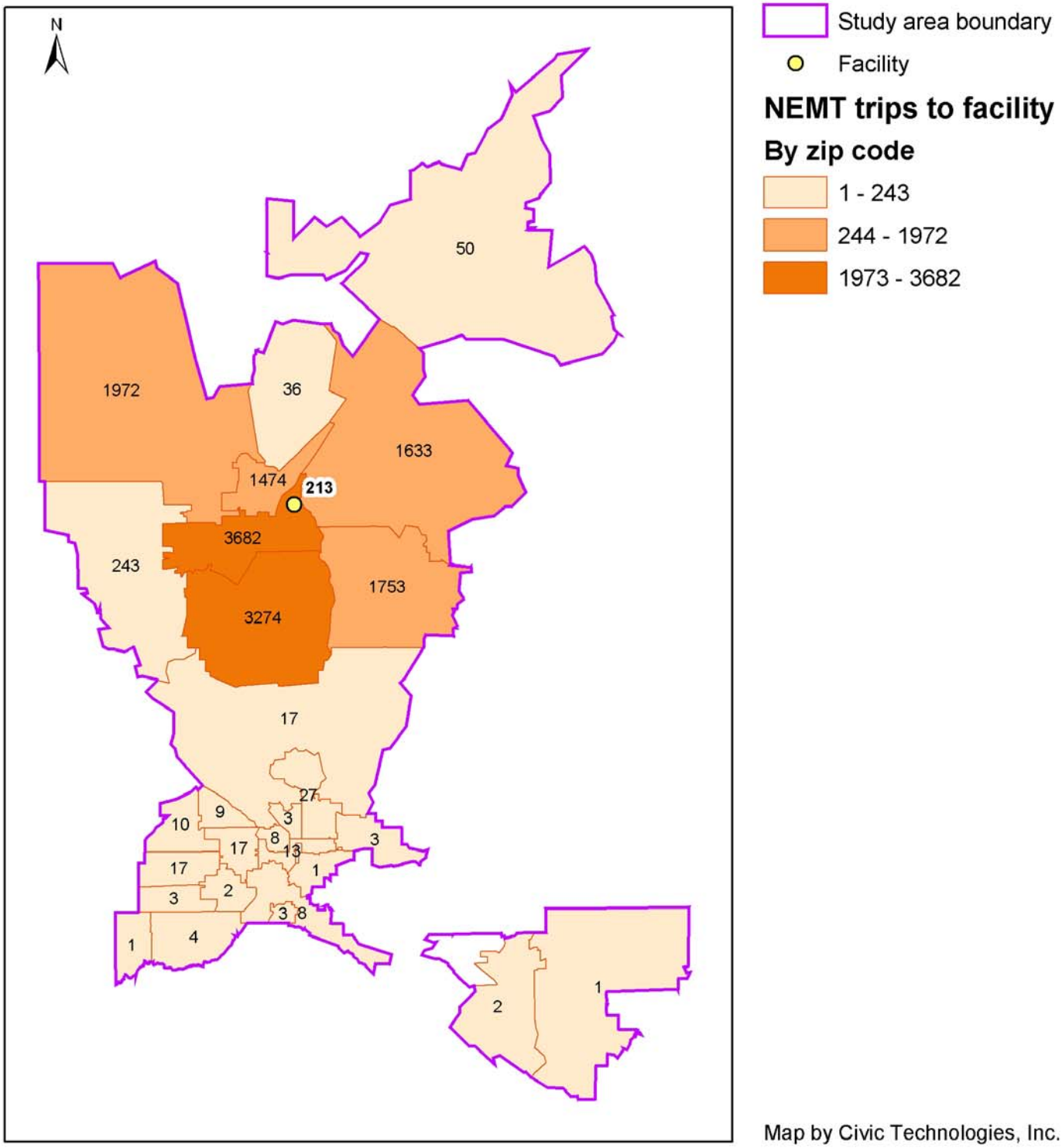


Figure 8: Top 3 -- Loma Linda University Medical Center

11234 Anderson Street, Loma Linda, CA 92354

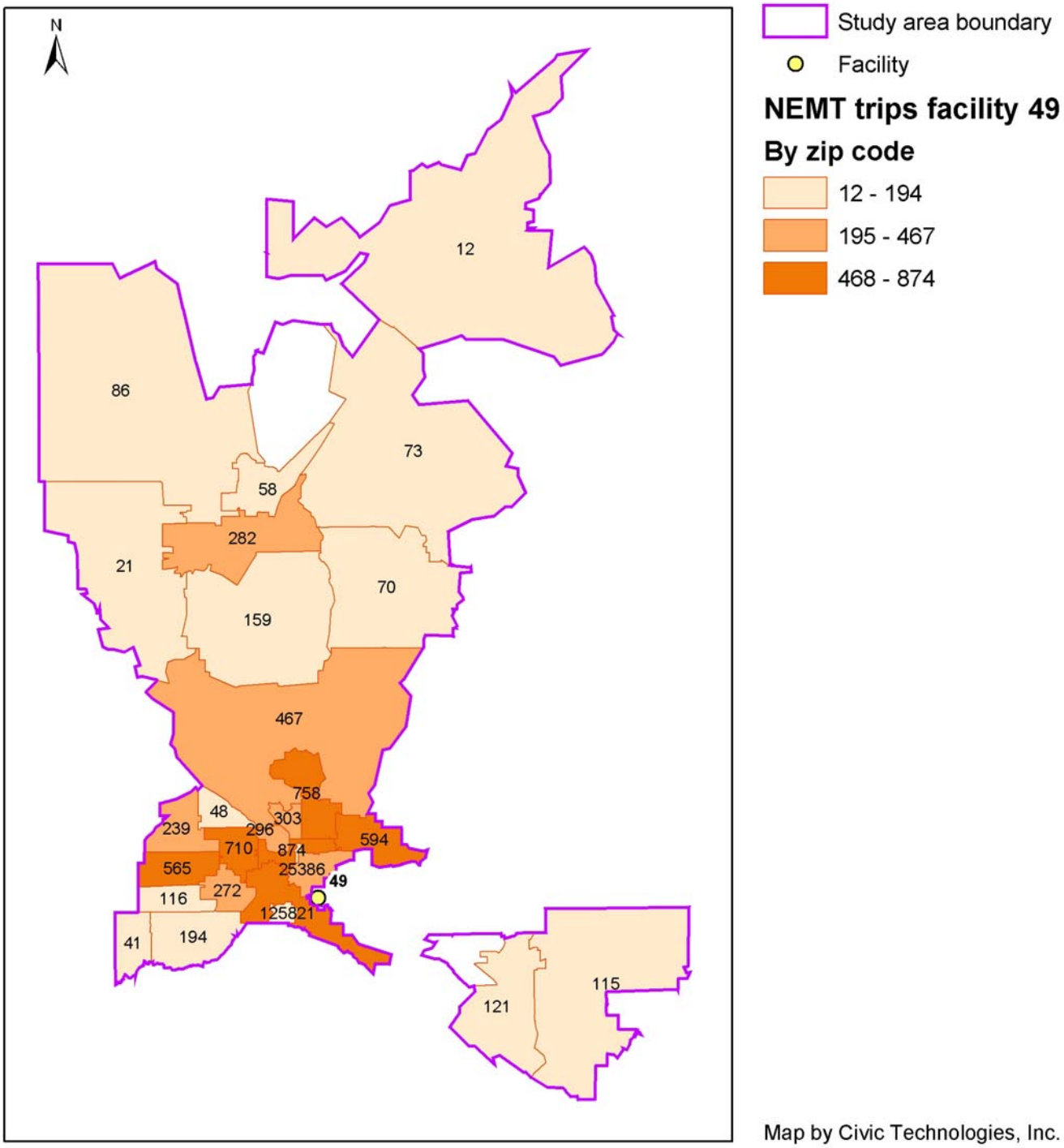


Figure 9: Top 4 -- St. Bernardine Medical Center

2101 N. Waterman, San Bernardino, CA 92404

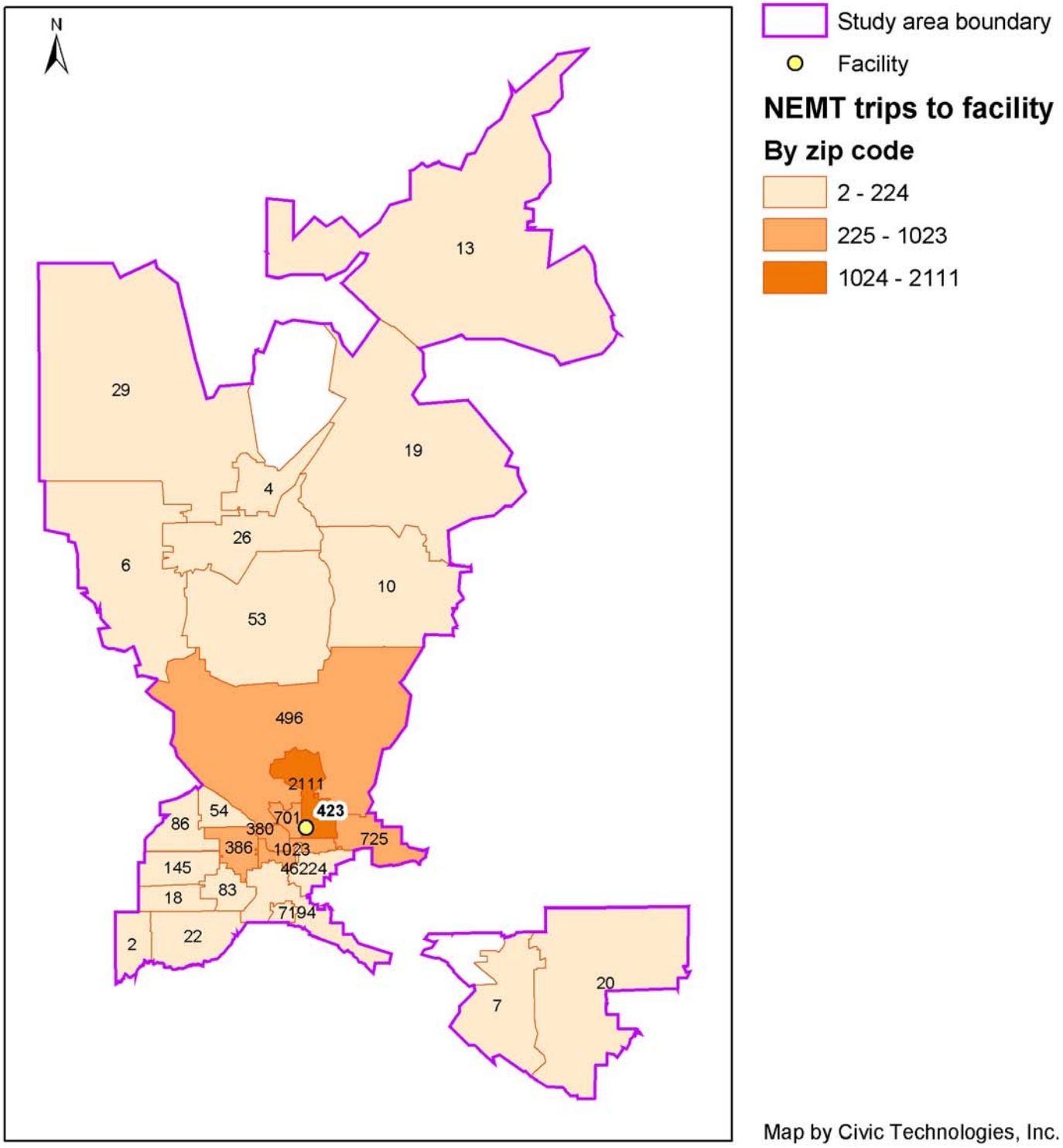
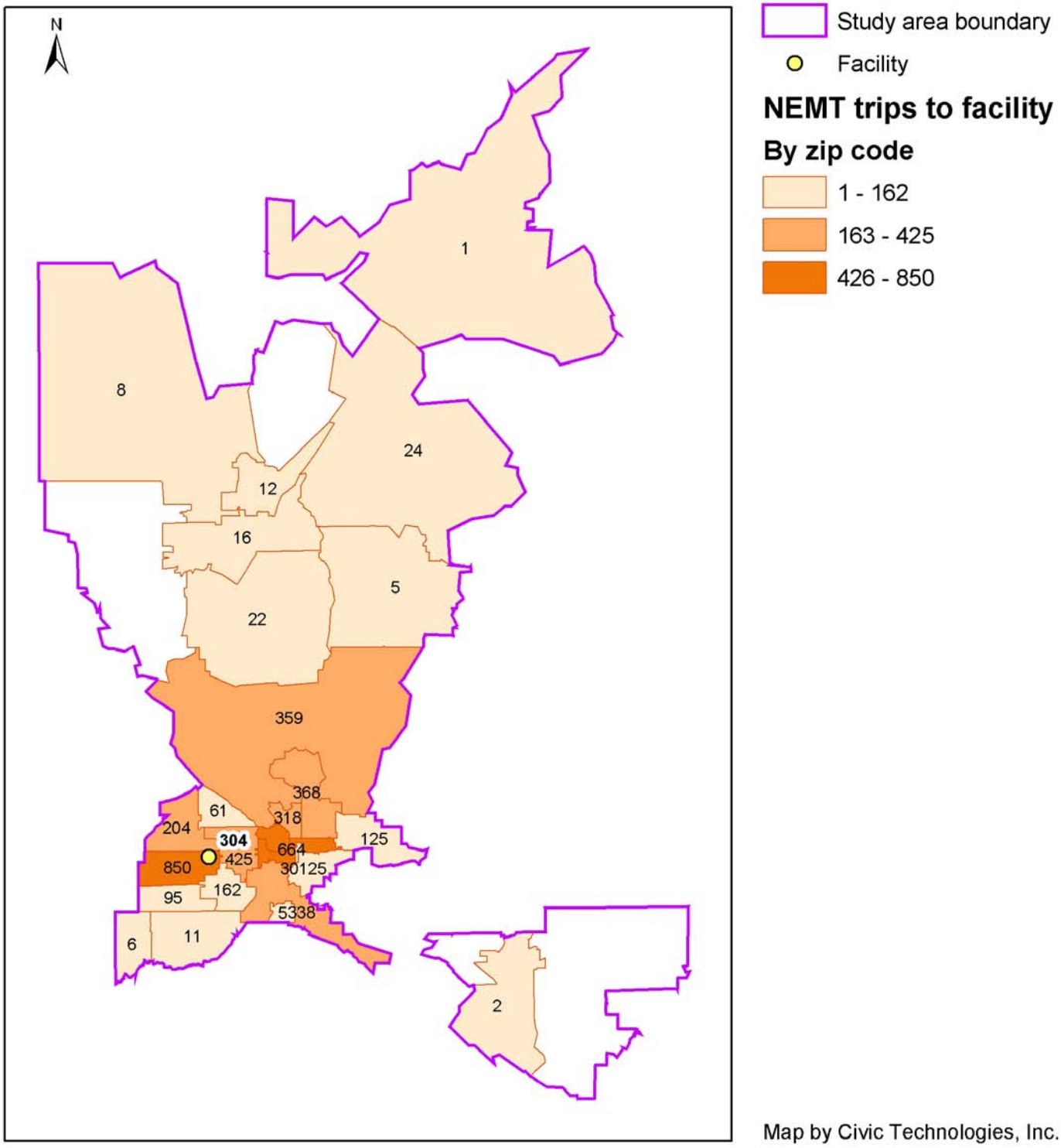


Figure 10:Top 5 -- La Salle Pediatric Medical Group

17577 Arrow Boulevard, Fontana, CA 92335



- The most visited medical facility in the study area is Arrowhead Regional Medical Center in the San Bernardino Valley area. Figure 6 shows that the largest proportion of IEHP members visiting that facility also reside in that geographic area, as well as neighboring Victor Valley. However, there are IEHP members visiting this facility from as far away as Barstow.

- The second most visited medical facility is Victor Valley Community Hospital in the Victor Valley geographic study area, and the largest proportion of IEHP members visiting that facility also reside in that geographic area. Only a small number of members travel to this facility from the Jurupa area.

- The third most visited facility is Loma Linda University Medical Center also located in the San Bernardino Valley area, with many of the trips by members originating in the area, and a significant number of members from all other regions also visiting this facility. Specifically, members who reside in Victor Valley and even Barstow visit this facility for medical treatment.

- The fourth most visited facility is St. Bernardine Medical Center located in the San Bernardino Valley area, with most of the trips by members originating in the area, or in the Victor Valley area.

- The fifth most visited facility is La Salle Pediatric Group located in the San Bernardino Valley area, with most of the trips by members originating in the area.

Inter-regional NEMT Trips Made by IEHP Member to Healthcare Facilities

To better understand the travel patterns of IEHP members for medical care, origins and destinations were mapped for each study area as shown in Figures 11 through 14 below.

- The table below shows that a significant amount of NEMT trips are inter-regional, with trips being made between rural and suburban areas to the urbanized area

- 67% to 96% of facilities visited by members were outside their geographic area. These represent 21% to 78% of all visits made.

- Jurupa and Banning/Beaumont together had the most inter-regional trips (78%) with the highest percentage of out-of-area facilities (96%). This is followed by Barstow with 52% inter-regional trips to 82% out-of-area facilities.

INTER-REGIONAL NEMT TRAVEL PATTERNS BY GEOGRAPHIC AREA

Geographic Area	% Out-of-area Facilities	% Out-of-area Visits
Banning/Beaumont & Jurupa	96%	78%
San Bernardino Valley	67%	22%
Victor Valley	69%	21%
Barstow	82%	52%

Figure 11: San Bernardino Valley Inter-Regional IEHP Member NEMT Trips

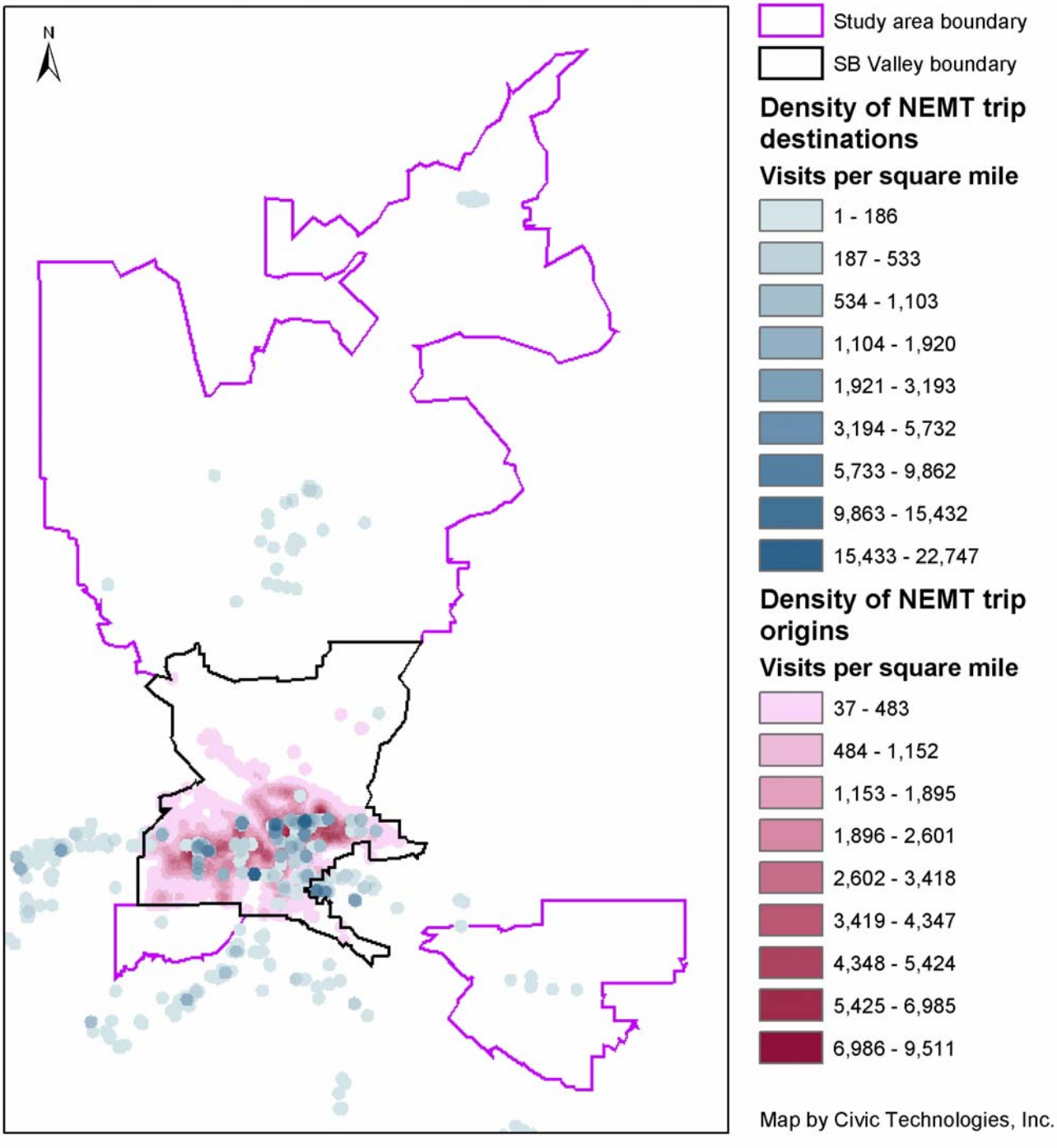


Figure 12: Victor Valley Inter-Regional NEMT Trips

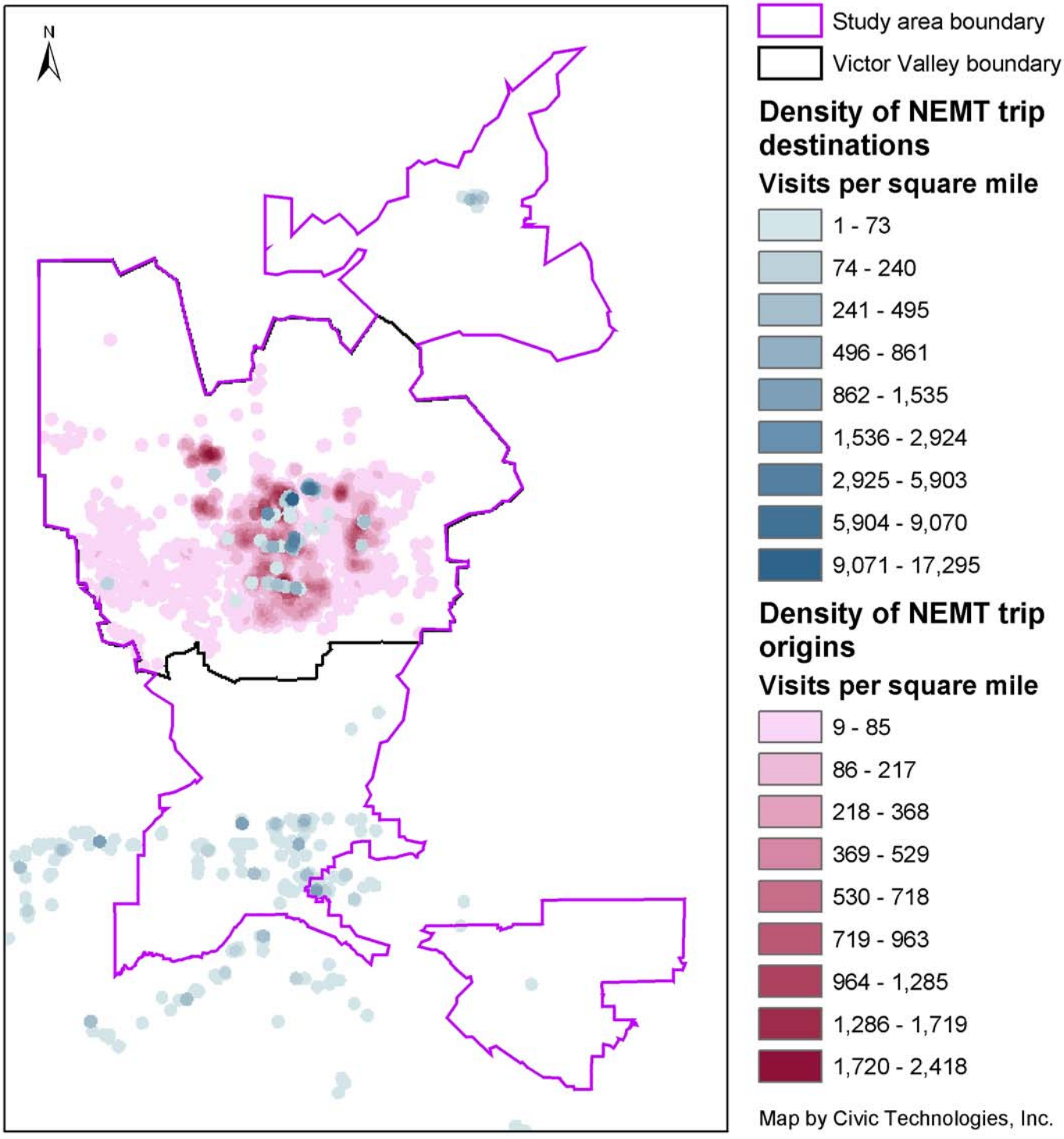


Figure 13: Barstow Inter-Regional NEMT Trips

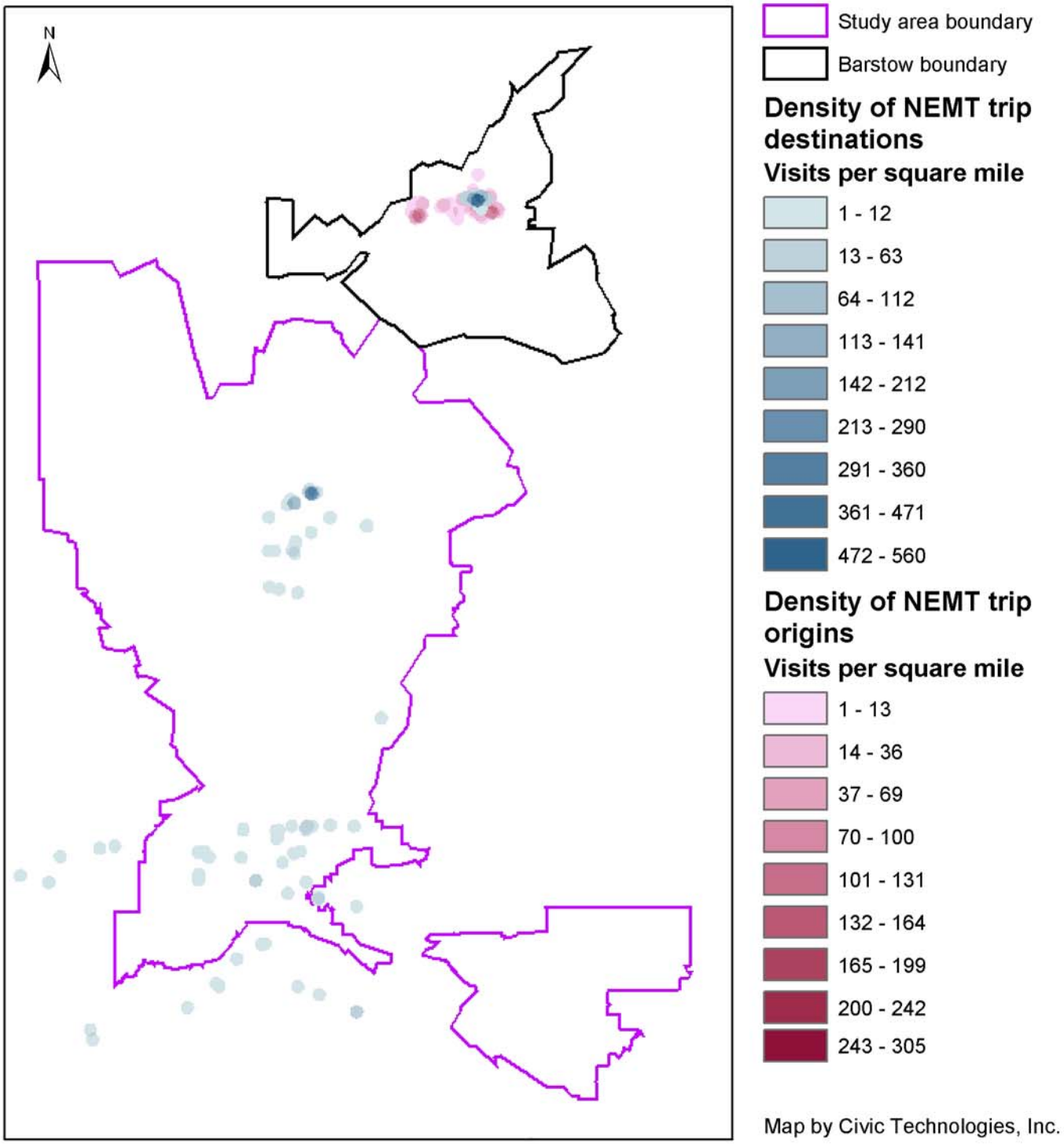
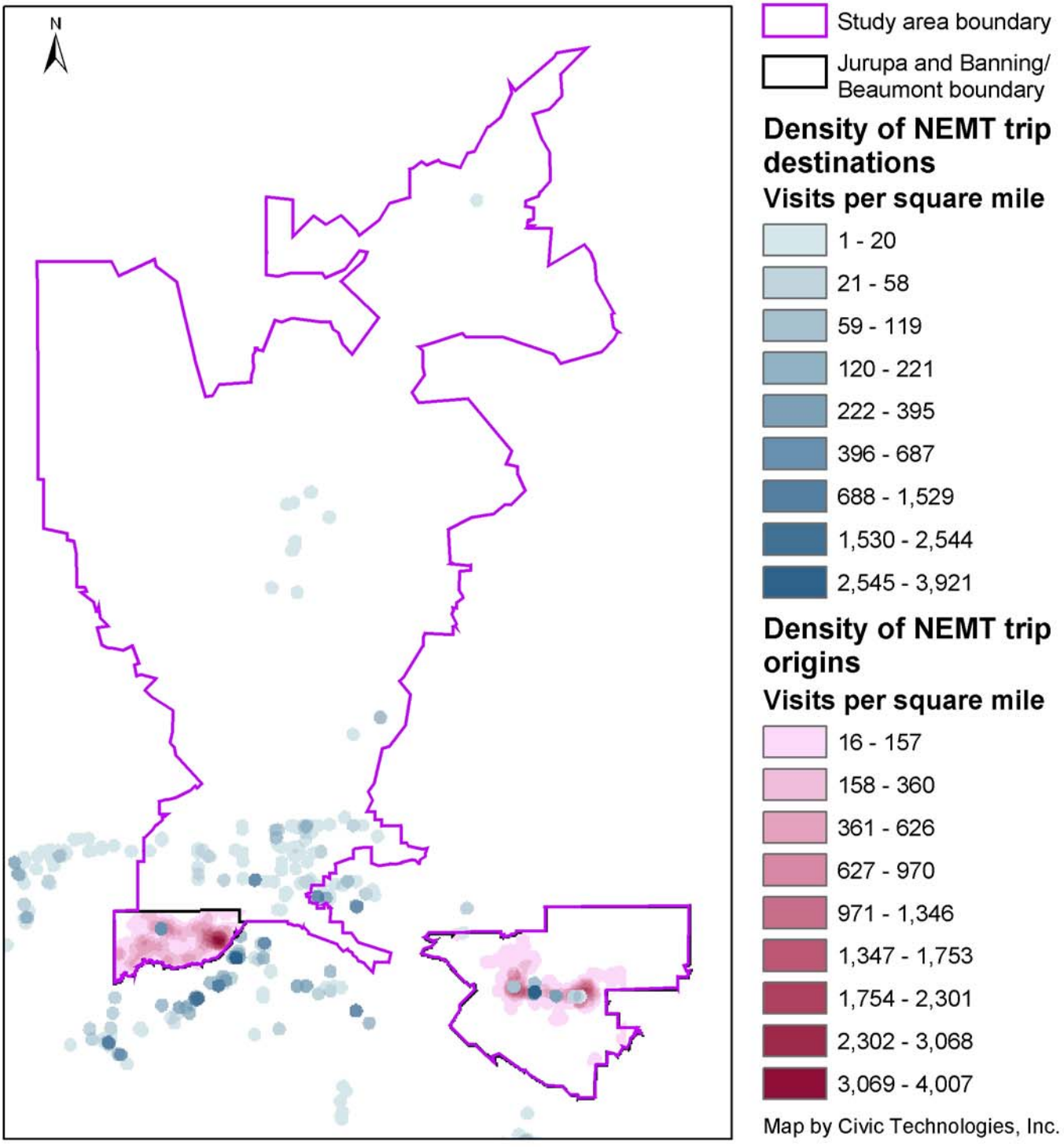


Figure 14: Jurupa and Beaumont/Banning Inter-Regional NEMT Trips



Transit Services Operated Within the Entire Study Area

GIS transit route and schedule data was obtained from the six public transit operators:

- Omnitrans
- RiversideTransit Agency
- Victor Valley Transit Authority
- Barstow Area Transit
- City of Banning
- City of Beaumont

Fixed route services data provided covered only the five study areas. IEHP members and healthcare facilities proximity to transit and service frequency to members, population segments and facilities were analyzed. Census 2000 block populations within a quarter mile of fixed routes were quantified. For census blocks only partially within the quarter mile buffer, their population was prorated based on the proportion of census blocks within the buffer. Figure 15 shows the distribution of fixed-route services by operator in the study area.

Dial-A-Ride service coverage areas by operator were also analyzed and mapped as shown below in Figure 16.

Figure 15: Fixed Routes by Transit Operator

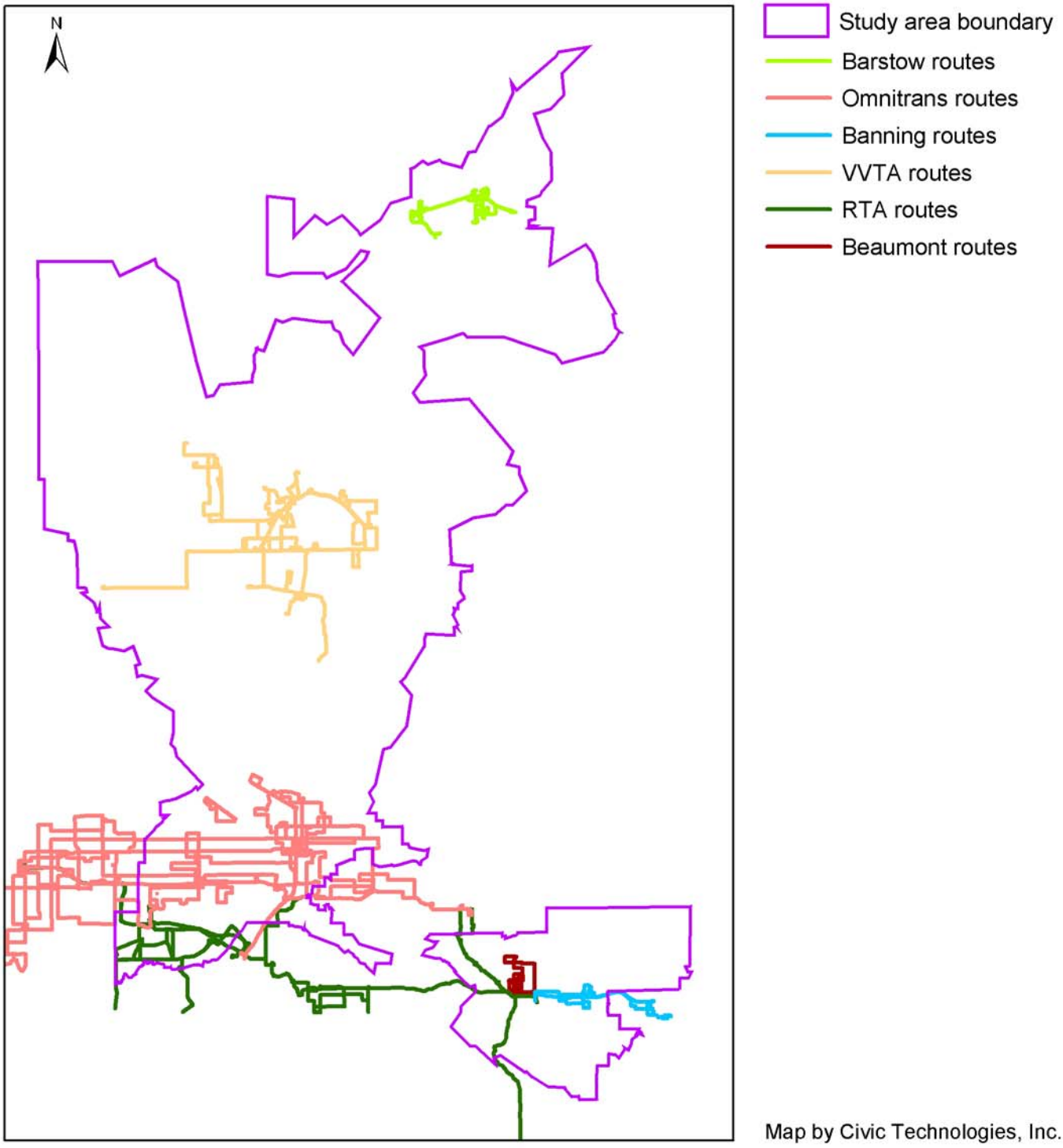


Figure 16: Dial-A-Ride by Transit Operator

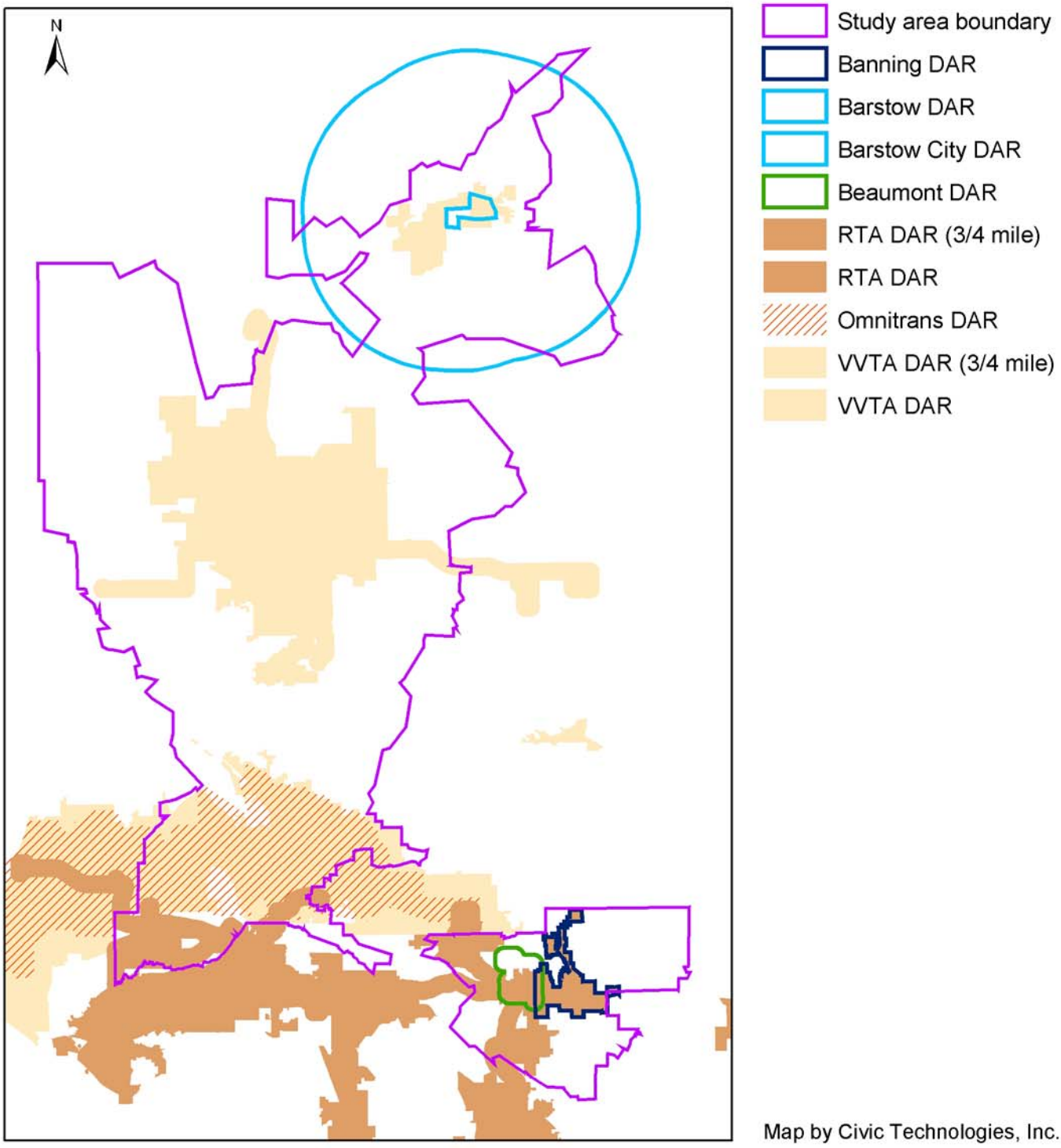


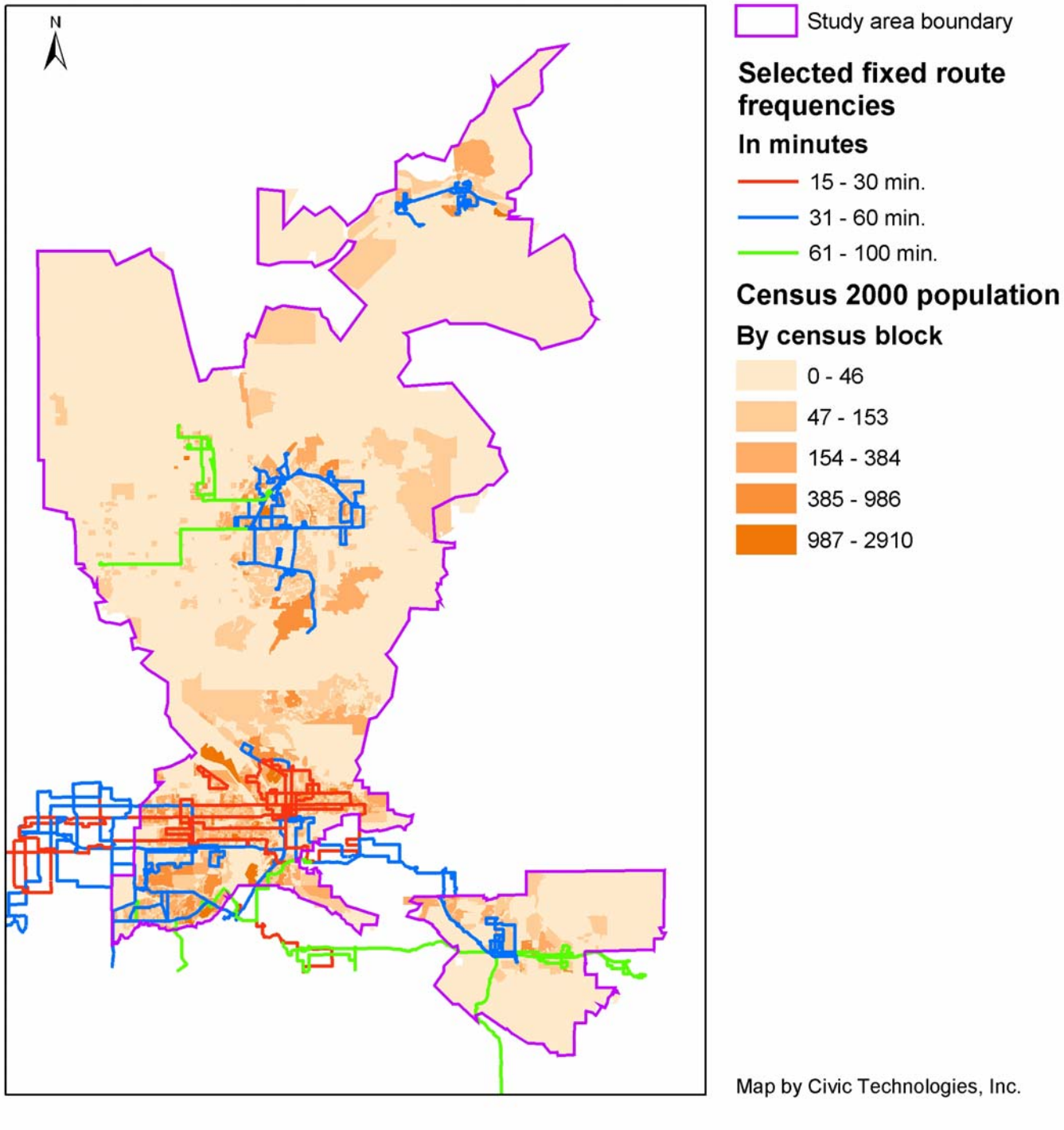
Figure 17 below shows that:

- Although 57% of the total study area population is within a quarter mile of the selected fixed routes, only 31% of the population live near high frequency routes (15 to 30-minute headways).
- These high frequency routes are all concentrated in the San Bernardino Valley study area.
- The other four geographic study areas are primarily served by routes with 45 to 60 minute headways.
- The outlying areas of the Victor Valley are served by routes with over 60 minute headways.
- Service between Jurupa, Banning/Beaumont to other Riverside cities are also receiving service which operates on over 60-minute headways.
- All five study areas have demand-responsive services, with 94% of the total study area population living within a DAR service area.

Notably, demand-responsive services have restricted eligibility criteria, limited to either ADA-certified riders or seniors and persons with disabilities.

STUDY AREA TRANSIT ACCESS				
Selected Fixed Routes	**15-30 min**	**45-60 min**	**Over 60 min**	**All Routes**
Study Area Population	1,032,249	1,032,249	1,032,249	1,032,249
Within quarter mi	324,392	229,426	37,988	591,807
Percent within quarter mi	31%	22%	4%	57%
Outside quarter mi	707,857	802,823	994,261	440,442
Percent outside quarter mi	69%	78%	96%	43%
DAR				
Study Area Pop	1,032,249			
Within DAR	975,385			
Percent within DAR	94%			
Outside DAR	56,864			
Percent outside DAR	6%			

Figure 17: Fixed Route Relationships to Study Area Population



IEHP Members' Proximity from Home Origins to Public Transit Services

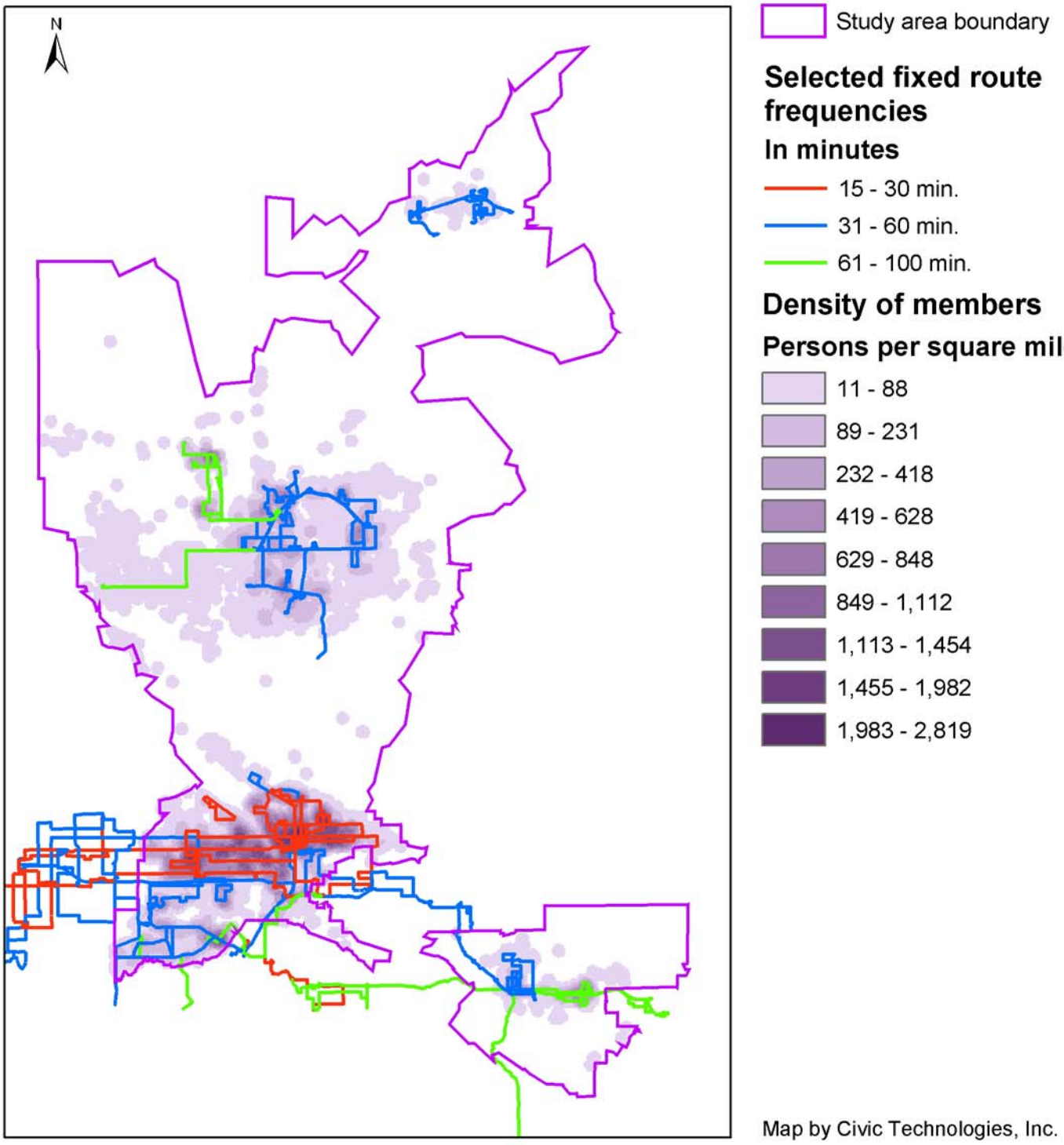
Figure 18 shows that:

- A large percentage (71%) of IEHP members live within a quarter mile of fixed route services; 42% reside within close proximity of high frequency routes.

- 99% of IEHP members live within a DAR service area

IEHP MEMBERS TRANSIT ACCESS				
Selected Fixed Routes	**15-30 min**	**45-60 min**	**Over 60 min**	**All Routes**
IEHP Members	100,149	100,149	100,149	100,149
Within quarter mi	41,955	23,218	5,488	70,661
Percent within quarter mi	42%	23%	5%	71%
Outside quarter mi	58,194	76,931	94,661	29,488
Percent outside quarter mi	58%	77%	95%	29%
DAR				
IEHP Members	100,149			
Within DAR	98,895			
Percent within DAR	99%			
Outside DAR	1,254			
Percent outside DAR	1%			

Figure 18: Fixed Route Relationships to IEHP Member Densities



Proximity of IEHP Healthcare Facilities to Public Transit

(a) A vast majority (93%) of IEHP facilities in the study area are located within a quarter mile of fixed route services.

(b) Nearly half (45%) of all IEHP facilities in the study area are located within close proximity of high frequency transit routes. These facilities generate demand for 63% of NEMT trips.

(c) 99% of all IEHP facilities in the study area are within a DAR service area.

IEHP FACILITIES ACCESS TO TRANSIT			SERVICE FREQUENCIES					
	All Routes		15 to 30 min		45 to 60 min		Over 60 min	
Selected Fixed Routes	Facilities	Visits	Facilities	Visits	Facilities	Visits	Facilities	Visits
Facilities within Study Areas	433	151,110	433	151,110	433	151,110	433	151,110
Within quarter mile	404	144,671	195	94,862	200	49,189	9	620
Percent within quarter mile	93%	96%	45%	63%	46%	33%	2%	0%
Outside quarter mile	29	6,439	238	56,248	233	101,921	424	150,490
Percent outside quarter mi	7%	4%	55%	37%	54%	67%	98%	100%
DAR								
Facilities within Study Areas	433	151,110						
Within DAR	429	151,018						
Percent within DAR	99%	100%						
Outside DAR	4	92						
Percent outside DAR	1%	0%						

Inter-Regional Transit Service

While a large percentage of members and facilities have access to some level of fixed route services, these services are restricted to serving the local area, and are concentrated within each study area. There are also areas of overlap between RTA DAR services and the San Bernardino Valley. The data demonstrates that there is a gap in service interregional fixed route service connections that makes longer distance travel difficult at best.

Additional Analysis of IEHP Member Data

As an adjunct to the GIS analysis, a separate computerized decision-tree statistical analysis was prepared by the project team to find the demographic relationships between IEHP members NEMT trips and census 2000 variables. This was used to create a demographic profile of census blocks that generated the highest number of NEMT trips to IEHP facilities. Using non-emergency medical trips as the “target variable”, the following demographic indicators were used as “predictor variables”.

- ❑ Race and ethnicity
- ❑ Age
- ❑ Tenure and household size
- ❑ Journey to work
- ❑ Educational attainment

- ❑ Employment status
- ❑ Occupation
- ❑ Household income
- ❑ Disability
- ❑ Vehicle ownership

The analysis showed that census blocks generating the highest number of trips made to medical facilities also had the following demographic characteristics:

Group 1 (71 blocks fit criteria and contain 11,006 people)

- – High percentage of RENTER occupied 5+ PERSON households
- – High percentage of OWNER occupied 3 to 4 PERSON households
- – High percentage of persons with ABOVE 9th grade education
- – High percentage of non-Hispanic WHITE population
- – High percentage of AUTOLESS households with householders age 15 to 54

Group 2: (1,910 blocks fit criteria and contain 305,527 people)

- – High percentage of RENTER occupied 3+ PERSON households
- – High percentage of BELOW 9th grade education
- – High percentage of CHILDREN age 0 to 4

Group 3: (581 blocks fit criteria and contain 101,227 people)
- – High percentage of RENTER occupied 5+ PERSON households
- – High percentage of BELOW 9th grade education
- – LOW percentage of Non-Hispanic WHITE persons
- – High percentage of persons in SERVICE OCCUPATIONS
- – Less than 50% RENTER occupied 2-PERSON households

Group 4: (129 blocks fit criteria and contain 8,872 people)
- – High percentage of RENTER occupied 5+ PERSON households
- – High percentage of BELOW 9th grade education
- – High percentage of SINGLE PARENT households
- – High percentage of persons NOT IN LABOR FORCE

Group 5: (112 blocks fit criteria and contain 10,631 people)
- – High percentage of RENTER occupied 3+ PERSON household
- – High percentage of OWNER occupied 3 to 4 PERSON households
- – High percentage of BELOW 9th grade education

It is important to note that the analysis did not assign ranking to Groups 1-5 by number of trips taken, only provides us with information on how many people by census block fit certain demographic characteristics. Group 1 can be simply characterized as:

- ❑ Large non-Hispanic white auto-less households, who are primarily renting

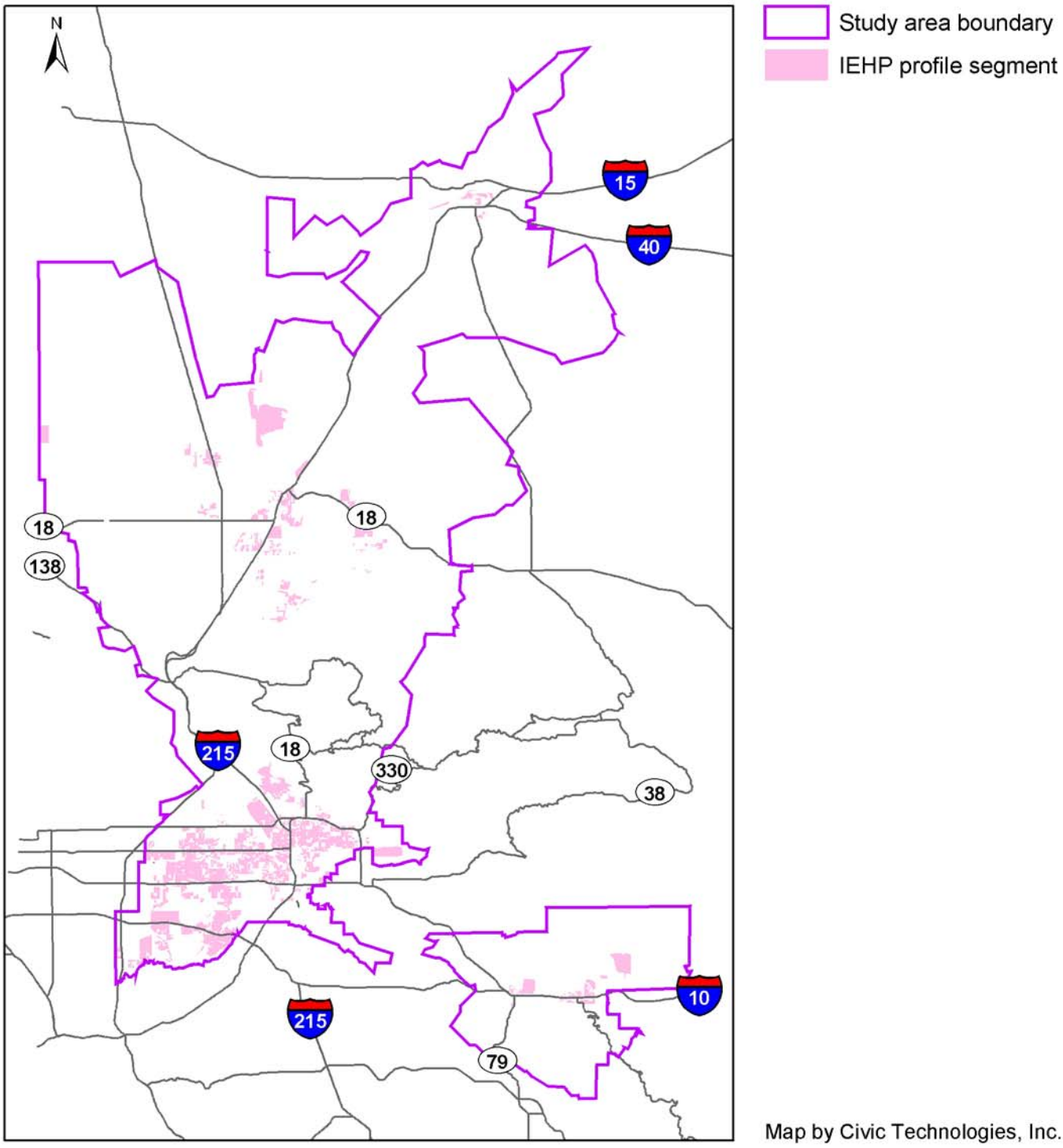
Groups 2 through 5 can be characterized as:

- ❑ Large, young minority families (many in single parent households), who are primarily renting, with very low educational attainment, and mostly in service occupations or not in the labor force; or

The project team is aware that IEHP health plan membership is generally comprised of low income families on Medi-Cal. However, the project team performed the decision-tree analysis for the purposes gaining more detailed demographic characterizations of IEHP subscribers. These characterizations assisted in determining where those having similar characteristics to IEHP members reside in the study area.

The project team was then able to map census blocks within the study areas with demographic profiles similar to IEHP members, as shown below in Figure 19. This information is useful in determining where those who may be making medical trips reside in the study area, and suggests potential need.

Figure 19: IEHP Profile Segment Census Blocks



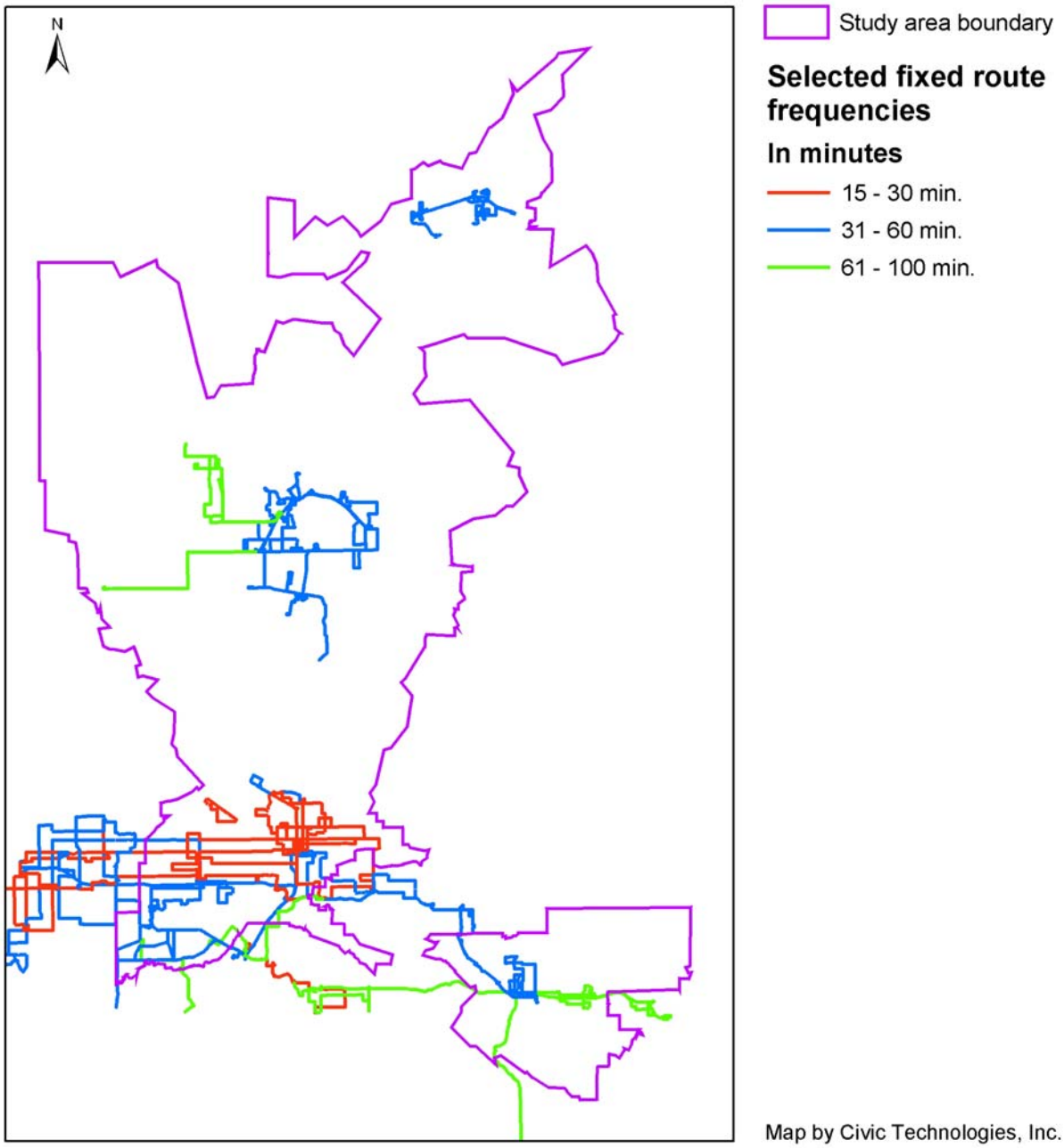
IEHP Profile Segment Proximity to Transit

Figure 20 shows:

- 73% of the IEHP profile segment is within a quarter mile of a selected fixed route
- Close to half (49%) of this population is within high frequency routes
- 100% of the IEHP profile segment is within a DAR service area

IEHP PROFILE SEGMENT TRANSIT ACCESS				
Selected Fixed Routes	**15-30 min**	**45-60 min**	**Over 60 min**	**All Routes**
IEHP profile segment	437,288	437,288	437,288	437,288
Within quarter mi	215,108	85,086	18,192	318,386
Percent within quarter mi	49%	19%	4%	73%
Outside quarter mi	222,180	352,202	419,096	118,902
Percent outside quarter mi	51%	81%	96%	27%
DAR				
IEHP profile segment	437,288			
Within DAR	436,181			
Percent within DAR	100%			
Outside DAR	1,107			
Percent outside DAR	0%			

Figure 20: Fixed Route Relationships to IEHP Profile Segment



12.2.3 GIS Analysis of Telephone Survey Results

Survey profile segment

A demographic profile of respondents who missed appointments due to a lack of transportation surfaced from the results of telephone survey. This profile was the basis for identifying a "survey profile segment" from within the general study area population in an effort to do further analysis of the population who missed appointments due to lack of transportation.

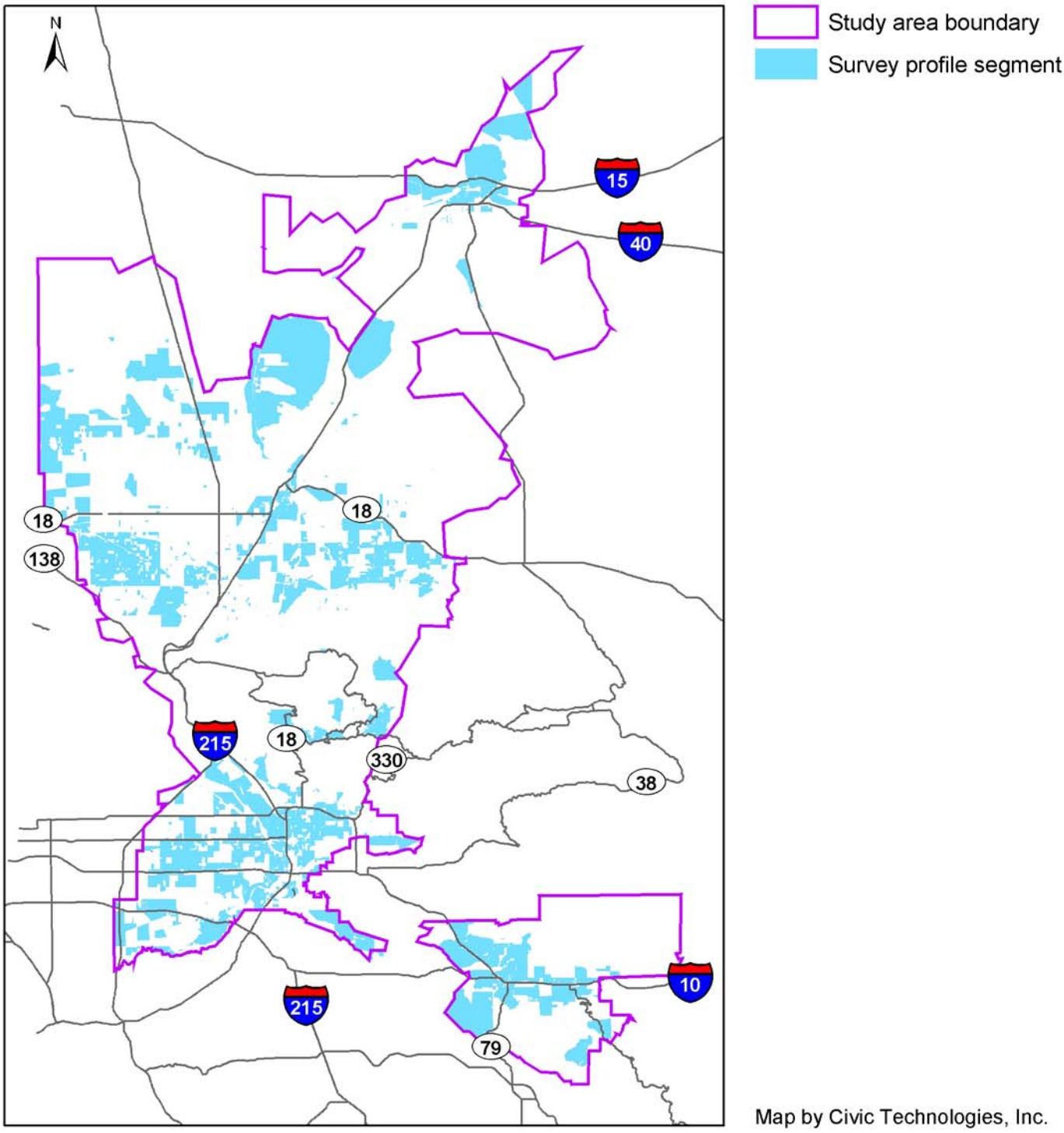
The project team characterized the 5.4% of the sample (which included those with their own transportation and those who depended upon others) obtained from the results of the telephone survey that reported missing an appointment due to a lack of transportation, as follows:

- 25 to 34 years old
- Incomes of less that $20,000 a year
- Women
- Medi-Cal recipients
- Someone in the household (not necessarily the respondent) had a mobility limiting disability
- Depended on others for their transportation to appointments (friends or family members and public transportation)
- Completed the interview in Spanish

Based on the survey profile segment characterization above, census blocks within the following percentages of any, all or a combination of the following demographic characteristics were selected, and those census blocks with the highest number of this profile segment were mapped (Figure 21). Percentages were determined based on natural breaks in the data:

- Females 25 to 34 > = 16%
- Spanish speaking adults > = 17%
- Household incomes $25K and below > = 39%
- Disabled persons 16 and up > = 21%

Figure 21: Survey Profile Segment Census Blocks



Population with potential NEMT needs

The project team quantified a population segment having the potential to miss appointments due to a lack of transportation based upon the combinations of demographic variables uncovered in the telephone survey:

- Women ages 25 to 34
- Income below $25K
- Spanish speakers
- With disability

For this analysis the highest value of the range of the population segment meeting all four of demographic variables was 585,596 people, as shown in the table below.

POPULATION WITH POTENTIAL NEMT NEEDS						
Number of Census blocks w/in Study area	**With Total Population**	**Select statement**	**Women age 25 to 34**	**Income below $25K**	**Speaks Spanish**	**With Disability**
17	318	Meet all 4	**X**	**x**	**X**	**X**
26	470	Meet all 3	**X**	**x**	**X**	
61	714	Meet all 3	**X**	**x**		**X**
88	1,333	Meet all 2	**X**	**x**		
3,723	332,142	Meet any 2	**X**	**x**		
4,501	425,693	Meet any 3	**X**	**x**	**X**	
6,711	536,090	Meet any 3	**X**	**x**		**X**
7,164	585,596	Meet any 4	**X**	**x**	**X**	**X**

This analysis offered some insight into the numbers of people in the study area having potential to miss medical appointments due to lack of transportation. An estimate of the true number of people having a potential to miss medical appointments due to a lack of transportation lies somewhere within the range.

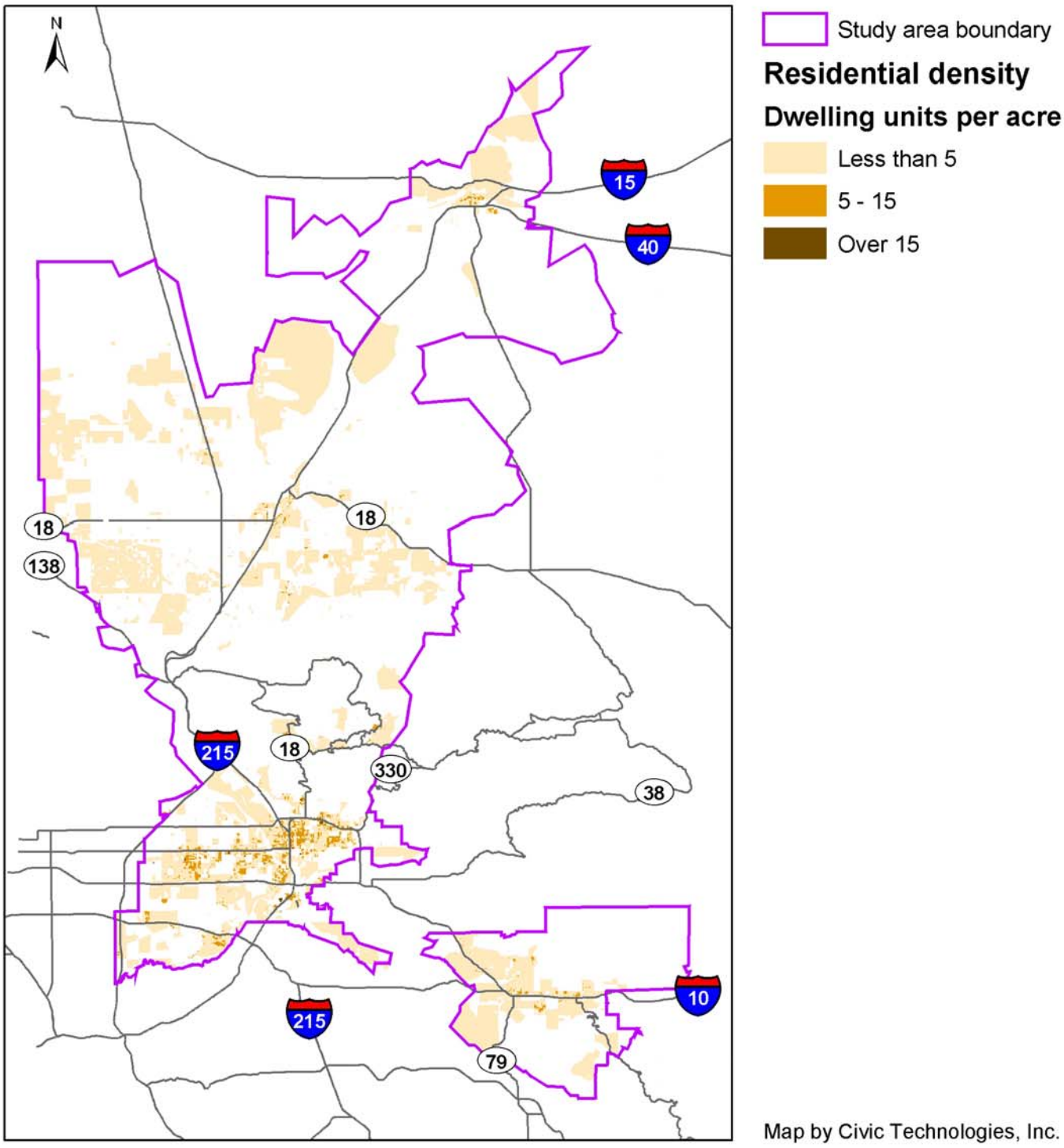
Residential density

Figure 22 shows that of 177,533 households, close to two-thirds or 62% (110,621 households) of survey profile segment households are in low density areas (less than 5 Dwelling Units (D. U. per acre). In addition:

- Approximately one-third or 33.7% (60,008 households) of survey profile households are in medium density areas (5 to 15 D.U.s per acre). These areas are within the San Bernardino Valley study area.

- A very small percentage of the survey profile segment or 4% (6,924 households) are in high density areas.

Figure 22: Residential Density of Survey Profile Segment



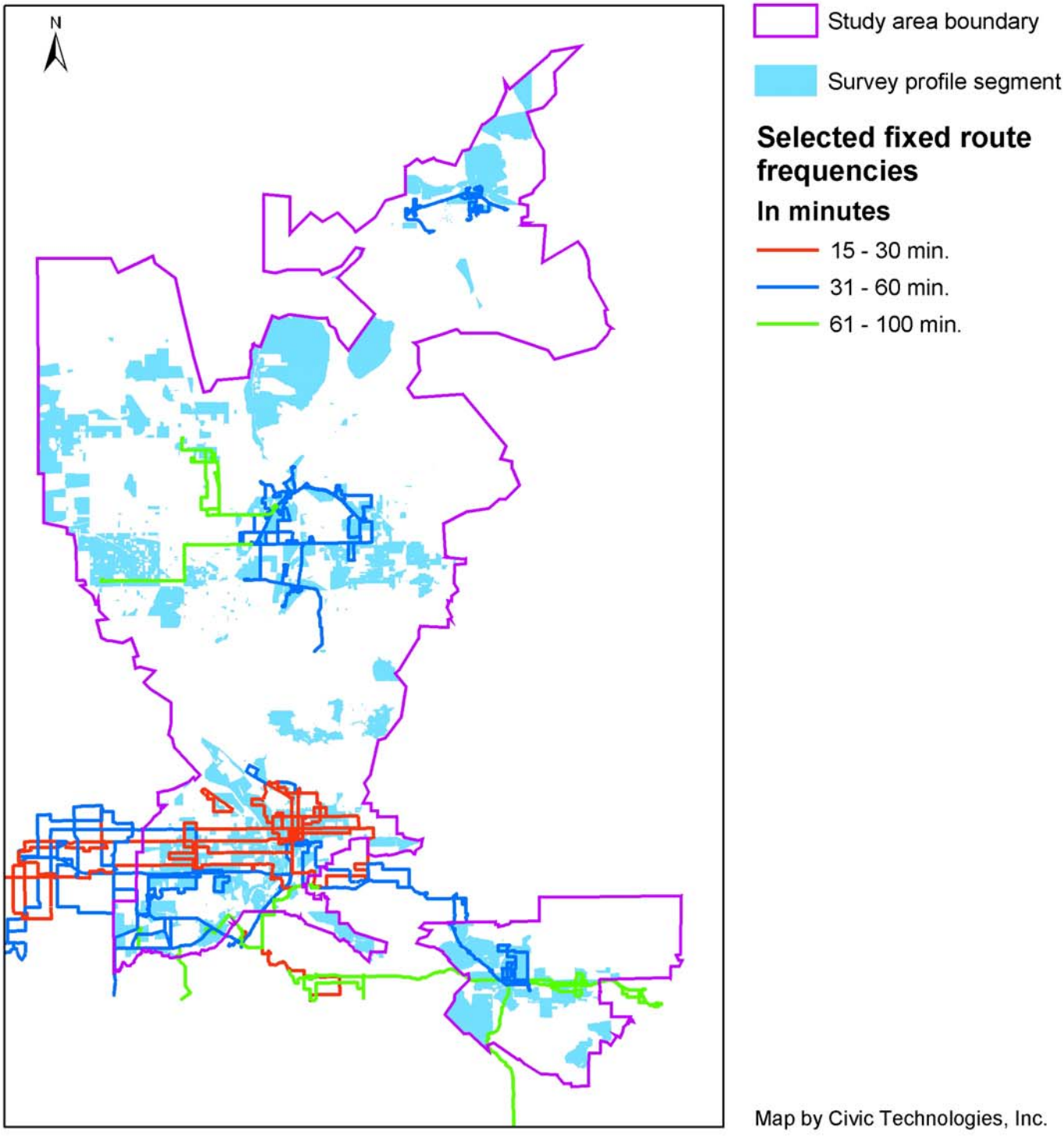
Survey Profile Segment Proximity to Transit

Using the highest value of the range derived in the previous survey profile segment analysis (585,596) members of the project team was able to determine the proximity to transit for this segment. The table below and Figure 23 illustrates that:

- Only 31% of the survey profile segment is within a quarter mile of fixed-routes services, with 16% living near high frequency routes; and that
- 96% of the survey profile segment is within a DAR service area.

SURVEY PROFILE SEGMENT TRANSIT ACCESS				
Selected Fixed Routes	**15-30 min**	**45-60 min**	**Over 60 min**	**All Routes**
Survey profile segment	585,596	585,596	585,596	585,596
Within quarter mi	96,614	65,759	17,015	179,388
Percent within quarter mi	16%	11%	3%	31%
Outside quarter mi	488,982	519,837	568,581	406,208
Percent outside quarter mi	84%	89%	97%	69%
DAR				
Survey profile segment	585,596			
Within DAR	562,500			
Percent within DAR	96%			
Outside DAR	23,096			
Percent outside DAR	4%			

Figure 23: Fixed Route Relationships to Survey Profile Segment



12.2.4 Comparing the IEHP Member Profile Segment to the Survey Profile Segment

Recognizing our limitations in directly linking the IEHP member data directly to our telephone survey, the project team searched for opportunities to compare and contrast the data sets in ways that might be useful in the development of recommendations. We found that the demographic characteristics arising from the IEHP GIS CART analysis of those people making the most trips in the study area were similar in many ways with the 5.4% of the general population that said they missed medical appointments because of a lack of transportation. This provided the study team with some basis of establishing a relationship between those who are making trips in the IEHP member population, and those who indicated they are missing trips in the general population.

The table below shows an example of the areas of correlation between the two segments.

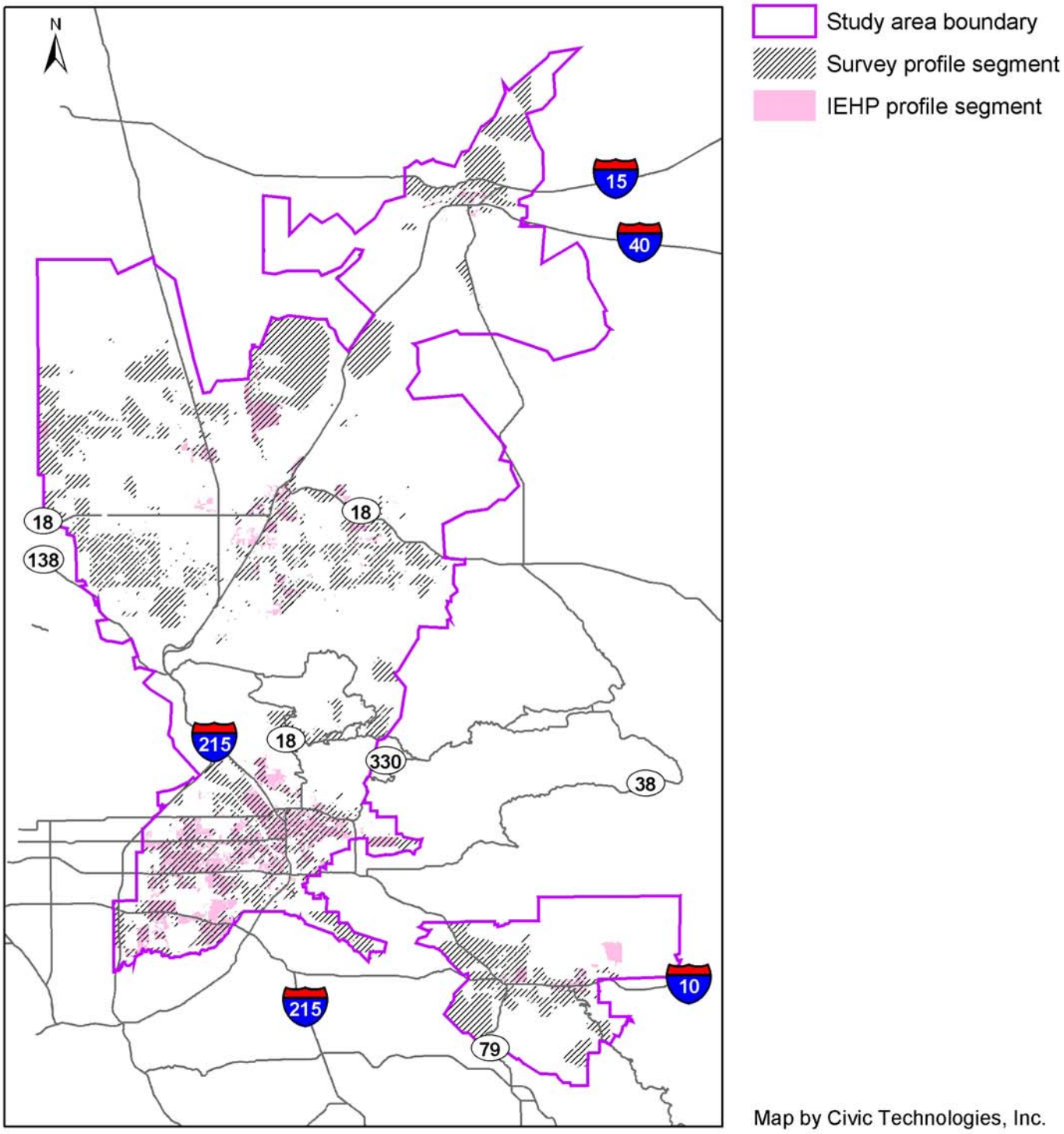
IEHP PROFILE SEGMENT	TELEPHONE SURVEY PROFILE SEGMENT
Young Minority families	25 to 34 years old
	Completed Interviews in Spanish
Service occupations or not in labor force	Incomes of less that $20,000 a year
Autoless	Dependant upon others for transportation

In addition, the telephone survey results showed that predominantly more women indicated that they missed appointments due to lack of transportation. This coincides with GIS analysis findings that the top two types of specialty appointments made by IEHP members was Pediatrics and OB/GYN.

It would logically follow that since some of the characteristics of both segments are similar, other aspects of the IEHP profile segment and the telephone survey segment would closely correlate, such as the fact that 81.5% of all census blocks within the IEHP profile segment matched those within the survey profile segment.

Figure 23 illustrates that even given the enormity of IEHP member data used in the analysis (over 100,000 records) in comparison with the telephone survey data (1,000 interviews) there is obvious overlap in where these two profile segments reside.

Figure 24: Comparison of IEHP Profile and Survey Profile Segments



GIS Key Findings

Population Demonstrating Potential NEMT Need

The telephone survey identified a segment of the general population with potential NEMT needs. These results were supported by GIS analysis of the IEHP and the survey profile segments. The survey profile segment developed for this analysis is shown to live predominantly in low density areas, and only one-third live within ¼ mile of fixed-route transit services. In addition, inter-regional fixed-route connections are not available. These factors would magnify the potential for this population segment to miss medical appointments because of lack of transportation options, particularly if they are dependent upon others for transportation.

Demand for Medical Trips to Facilities in the Study Area

The GIS analysis of IEHP data showed that healthcare facilities in the San Bernardino Valley generate a significant amount of medical trips. With the exception of Victor Valley Community Hospital in the Victor Valley, four out of the top five healthcare facilities generating medical trips are located in this area. This finding is logical because San Bernardino also has highest density of healthcare facilities located within the study area. These findings however, must be considered only in relation to IEHP members and the IEHP profile segment characterized for this analysis.

Fixed Route Service: Proximity and Access

The analysis shows that the IEHP profile segment generally resides within close proximity to local fixed-route services in most areas. However, service frequencies tend to be poor overall except in the San Bernardino Valley. As mentioned above, the survey profile segment has considerably less access to fixed-route services and services are less frequent.

Also, this analysis did not review the issues of transferring and connectivity between local fixed-routes. More research would be needed in order to determine how convenient the existing fixed-route transit options are (e.g., transfer wait times, travel times and number of transfers between services, etc.).

Demand Responsive Services

The five study areas appear to have excellent demand responsive service coverage. However, since demand responsive services, including ADA, are limited to elderly and disabled persons (with the exception of Barstow), these services would not be available to most IEHP members or members of the general population depending upon their individual circumstances. The issue of adequate DAR service coverage in the study area would need to be examined further should additional healthcare member or general population data (addresses, zip codes, facilities, etc.) become available. This would allow a more comprehensive assessment of need specific to other segments of the population.

Inter-Regional Transit Options

There is a significant volume of inter-regional NEMT trips being made, that are inadequately served by public transit originating from all of the other four study areas (Barstow, Victor Valley, Banning/Beaumont and Jurupa) to the San Bernardino Valley. The limited availability of inter-regional transit options precludes the use of transit by individuals as a reasonable travel alternative to medical facilities located at medium-to-long distances from their home.

12.3 SUMMARY OF QUANTITATIVE ANALYTICAL FINDINGS

The unavailability of missed appointment data did provide the project team with the opportunity to begin to validate or invalidate previous assumptions about the NEMT problem, and to make a determination about the magnitude of the problem as it exists in the study area. The results of the telephone survey, in conjunction with GIS analysis of these results and other study findings provided answers to the following basic questions:

1. Is there a need for non-emergency medical transportation to medical appointments for consumers residing within the study area?

2. If the need exists, what segment of the population is demonstrated to have the greatest need for non-emergency medical transportation in the study area?

3. In what areas of the study area does this target population reside?

4. To what extent does the target population have access to public transit as a transportation alternative to get their medical appointments?

A discussion of the findings and responses to these four questions relative to the GIS analysis are presented below.

1. Is there currently a need for non-emergency medical transportation to medical appointments for consumers residing within the study area?

Based upon results compiled from all study work activities, the project team concludes that a need does exist for non-emergency medical transportation for segments of the population residing within the study area.

Our conclusions are based upon the following findings:

Telephone survey results of the general population within the study area show a small percentage (5.4%) of the total population surveyed missed medical appointments due to lack of transportation. These persons include both those who have their own transportation, and those who are dependant upon others, including public transit to get to their medical appointments. In addition, survey findings show that the incidence of the problem for individuals missing medical appointments due to lack of transportation exists in comparable numbers all five geographic regions. This is supported by stakeholder input that indicates that at both the healthcare organization and consumer level, the problem of getting people to their healthcare appointments is real and requires a considerable continuous financial investment from those healthcare and support organizations and agencies operating services.

The GIS analysis provided insights into other aspects of the NEMT issue. Specifically, the facility analysis performed using IEHP facility locations and member medical trip data showed that the demand for healthcare services at healthcare facilities in the San Bernardino Valley is significant. This is not surprising given the large number of healthcare facilities in this urban area. However, this fact became important when we discovered that a large number of inter-regional medical trips are being made by IEHP members to San Bernardino from origins in Victor Valley, Barstow, Banning/Beaumont and Jurupa. In addition, the project team found that although public transit provides good local fixed-route coverage in all of the geographic study areas, inter-regional connectivity for the most part, is non-existent.

Considering these findings and the fact that the target survey profile segment of the population having the potential to miss medical appointments due to lack of transportation is likely comprised of low income individuals, many living in low density areas, it becomes clear that the magnitude of demand for medical services in the San Bernardino Valley area originating from all of the other four geographic study areas creates the need for transportation beyond the local area, and the sense that the NEMT problem is pervasive (as evidenced by the telephone survey of the general population). It is possible that the actual problem lies in peoples' inability to access medical facilities from outside the San Bernardino urban area. Indeed the problem would be appear to be pervasive, since the target survey segment profile identified for as a result of this study, would likely have considerable difficulty getting to San Bernardino Valley medical facilities from the other four study areas using transit alternatives.

2. **If the need exists, what segment of the population is demonstrated to have the greatest need for non-emergency medical transportation in the study area?**

The need does exist for non-emergency medical transportation options to get to medical appointments for segments of the population. Recognizing that the GIS analysis focused upon IEHP members, the profile segments that were then subsequently created through CART analysis were naturally reflective of the IEHP member population – low income families. It was interesting to find that there were numerous similarities in demographic characteristics between the survey profile segment and the IEHP profile segment. These similarities seem to suggest that low income, minority, young single mothers with children appear likely to have the greatest potential for missed appointments due to lack of transportation.

There were some pre-study assumptions that the elderly and disabled populations were having the most difficulty accessing their medical appointments due to lack of transportation, however, the telephone survey showed that despite their heavier dependence on friends or family members for their transportation, seniors missed or rescheduled about the same number of appointments due to a lack of transportation as anyone else in the study.

3. **In what areas of the study area does this target population segment reside?**

Figure 22 shows that the highest densities of the general population having similar demographic characteristics to the target survey profile segment (women, 25-34 years old, low income, Spanish speakers) reside predominantly in the low density residential areas of the Victor Valley, Barstow, Banning/Beaumont and Jurupa.

4. **To what extent does the target population have access to public transit as a transportation alternative to get to medical appointments?**

For the 62% of the target survey profile segment of the population living in low-density geographic areas of the study, the analysis shows that only 31% live within ¼ mile of fixed-route transit and that a very low percentage (16%) live near high frequency transit routes. However, our analysis does show that 96% of this profile segment does live within areas covered by demand-responsive services.

13. PROJECT RECOMMENDATIONS

13.1 Leading Towards Recommendations

Prior to presenting the recommendations, it is useful to review the key study findings. At the risk of oversimplifying all that has been previously stated, but in an effort to provide clarity, the following critical issues relative to this analysis are summarized, as follows:

General Study Findings

- Collectively viewed, the data and information gathered as a result of this study shows that segments of the population (includes those having their own transportation and those depending upon others for transportation) in the study area have missed medical appointments due to lack of transportation;

- Those who most frequently missed or rescheduled their healthcare appointment because of problems with their transportation more typically have the following demographic characteristics: *Women, 25 to 34 years of age, household incomes of less than $20,000 a year, Medi-Cal recipients, and Spanish speakers*. These same demographic attributes characterize respondents who use public transportation to get to their medical appointments;

- The telephone survey found that seniors get to their scheduled medical appointments. They typically missed or rescheduled *fewer* medical appointments than other age groups. A majority of the time seniors drive their own cars (81 percent) or ride with a friend of family member (13 percent) to their medical appointments;

- The San Bernardino Valley surfaced as the *destination target area* for additional research relative to missed medical appointments and other data collection efforts. However, the survey profile segment demonstrating the greatest potential to miss medical appointments resides primarily in the rural areas of the two counties. Additional origin and destination research is needed to clearly identify most problematic areas;

Healthcare-Related Findings

- State-level data suggests that *California's NEMT eligibility policies are not on par with those of other states.* Contrary to policies other states, eligibility for transportation assistance under the Med-Cal Program is based upon physical ability, and not economic need or the availability of transportation alternatives;

- From a nationwide perspective, the responsibility for operating NEMT programs continues to rest largely upon the shoulders of healthcare organizations primarily due to the funding of such programs from Medicaid and Medi-Cal;

- As evidenced by the limited amount of healthcare related data collected from healthcare organizations participating in this study, *there remains confusion in the area of interpretation of HIPAA requirements and internal organizational policy concerning the use of healthcare member and other data for research purposes.* However, IEHP established precedence on this study relative to providing data for research purposes under the auspices of a Business Associate Agreement executed with the project team;

- There are wide variations in the levels and methods of reporting relative to transportation expenses in California, making it difficult to determine the financial resources expended transportation by healthcare organizations in the study area;

- Data and information on missed medical appointments due to lack of transportation is the most important factor in assessing the severity of the NEMT problem, but is currently not being collected by healthcare organizations in the study area;

- Lack of funding is cited by stakeholders as the number one barrier to direct provision of NEMT services;

- Perceived success of NEMT programs currently operating throughout the country is less related to cost per trip than the ability of the operating agency to focus on the target population and consolidate administration of the program; and

- Significant coordination and cooperation between healthcare and transportation providers is needed to ensure successful operations of NEMT programs; "Hands-On" management is critical to reducing cost and improving service efficiency and overall quality.

- More medical trips are made by IEHP members to facilities in the San Bernardino Valley than any other geographic area. This geographic area correspondingly has greatest density of healthcare facilities;

- A large of number of inter-regional trips are being made by IEHP members to the San Bernardino Valley from origins in all of the other four geographic regions;

Public Transportation Findings

- Access to public transit services for IEHP members in the study area is very good. Data shows that IEHP members and the IEHP population segment targets are in most cases within close proximity to public transit (e.g., within ¼ mile walking distance from home to a transit stop) However, although 57% of the total study area population is within a quarter mile of fixed route service, only 31% of the population live near high frequency routes (15 to 30-minute headways);

- A vast majority (93%) of IEHP facilities in the study area are located within a quarter mile of fixed route services. Nearly half (45%) of all IEHP facilities in the study area are located within close proximity of high frequency transit routes. These facilities generate demand for 63% of NEMT trips. In addition, Dial-a-Ride and ADA-related services are operating in each area with services provided to the elderly and disabled;

- Public transit connections to medical destinations outside the local area are limited. Inter-regional connectivity for those desiring to use transit for longer distance trips to medical appointments needs improvement; and

- Customer convenience and service quality issues such as availability of service, service frequency, number of transfers, transfer wait times, and travel times need further examination to determine the impact on individuals traveling to medical destinations.

- Consideration of these key issues will be reflected in the project team recommendations discussed in detail below.

Challenges Facing the Healthcare System

The healthcare system in America currently faces many difficult challenges. At the recent American Health Care Congress meeting held in Ontario, California, healthcare professionals spoke from a number of perspectives about these issues, which included, but were not limited to[23]:

- Spiraling healthcare costs
- Lack of insurance coverage of over 44 million Americans
- Inherent waste and inefficiency
- Racial, ethnic and income related healthcare disparities
- Aging population
- Medical facility closures
- Lack of access

These healthcare issues facing the country are mirrored in the Inland Empire, and are amplified by various economic and demographic factors, such as:

- Population growth in the Inland Empire exceeds all counties in Southern California with the exception of Los Angeles;[24]

- High proportion of low income families (per capita income—only 12 counties in the State with lower per capita income);[25]

- Disproportionate share of uninsured

- Growth in the number Healthcare Professionals per healthcare consumer is not keeping pace (500 healthcare consumers to 204 new healthcare professionals—lower than all Southern California counties);[26]

The safe and efficient delivery of healthcare services and maintaining financial solvency are now more than ever the primary objectives of the healthcare industry. Although the lack of access to healthcare services and transportation remain on the overall health care agenda, and despite the fact that getting people to healthcare services is an important element of successfully delivering medical services, *there remains a general belief that healthcare should not be in the transportation business*.

Given that only IEHP provided financial and transportation information for use in the study, the project team was unable to properly assess the financial and transportation resources currently expended by other healthcare organizations in the study area. As a result of our discussions with these organizations, we understand that they are currently providing some level of NEMT to their individual members consistent with organizational policies and priorities. Moreover, our research indicates that there are presently no coordinated transportation options in place within the study area to address the needs of consumers needing transportation to get to their medical appointments.

"American Healthcare: Good, Bad and Ugly"; Presentation by James Kyle, LLC SPH, American Health Care Congress: October 12, 1004.

[24] Sources: Southern California Association of Governments, San Diego Association of Governments

[25] Source: U.S. Bureau of Economic Analysis

[26] Sources: California Employment Development Department, California Department of Finance

13.2 Recommendations

One of the initial goals of the study was to develop recommendations for pilot projects. The pilot projects envisioned to be an outcome of this study would potentially include service-related projects designed to meet the transportation needs of uncovered as a result of the study. However, the findings of this study do not at this time warrant the implementation of service-related projects.

Instead, our recommendations will focus upon actions that need to be taken in advance of any service-related alternatives being implemented. The project team approach to development of recommendations is designed to guide healthcare organizations and their partners in the creation of a coordinated "from the ground up" strategic partnership to plan, conduct research and to ultimately deploy new programs that will address the NEMT needs in the study area.

1. Establish a Regional Healthcare/Transportation Partnership

The establishment of a coalition of healthcare organizations and transportation agencies is the fundamental recommendation of the study. The Partnership should be comprised of a cross-section of healthcare care representatives and medical professionals, transit agencies and operators, social service agency representatives, non-profit healthcare representatives and consumer representatives that will work together to develop an "agenda" of actions needed to address non-emergency medical transportation needs in the study area. This group will serve as the catalyst and the guiding force in the implementation of all subsequent recommendations.

In order to ensure that the Regional Partnership is proactive in developing and implementing its' agenda, it is recommended that members of the group be willing and interested in accomplishing pre-determined objectives aimed at addressing NEMT needs. Therefore, those electing to participate in the Partnership could conceivably:

- Be a representatives of organizations, agencies and entities with an interest in addressing the issues relative to NEMT needs;
- Have the consent and support of executive management within their organization/agency to participate within the group;
- Be positioned to represent their agency/organizations' viewpoints, and have access to responsible decision-makers within their organization/agency; and
- Have some knowledge of NEMT issues as it is manifested within their organization/agency or in the community.

An outreach effort should be conducted to solicit stakeholder organization/agency interest and participation in this group. A dialogue should be initiated with healthcare and transportation organizations in the Inland Empire, including health plan representatives, public health departments, major hospitals and public transportation planning agencies/operators to ascertain their interest in NEMT issues and their willingness to work toward a coordinated "mix" of solutions. Recognizing that there are currently cooperative activities already being undertaken to address healthcare and transportation issues by other groups within the study area, including PASTACC and groups organized by the First Five Commission, outreach efforts should be include early interface with the members of these groups to leverage their experience with these issues, and potential participation in the Partnership.

Once formed and organized, it is recommended that the Partnership develop an "action-oriented" agenda that will guide their work activities for the first year. The agenda could focus initially on the following five general issues:

- ❑ Development of mission, goals and objectives
- ❑ Funding Support
- ❑ On-going Research
- ❑ NEMT Reporting Practices
- ❑ Consumer Outreach and Information

A lead organization/agency should be designated to ensure that the group remains focused, organized and functional. In addition, quarterly or bi-annual meetings as applicable, should be scheduled to continue to make progress toward achievement of goals and objectives.

The Partnership is envisioned initially as a cooperative strategic working group that operates on a volunteer basis, and is collectively convened to address NEMT issues. The Partnership as appropriate may progress to development of a more formal operating structure in the future. This size of this group will depend upon the interest and commitment of interested healthcare and transportation organizations/agencies.

It is anticipated that funding and support for future plans, projects and programs will be actively sought from external funding sources such as grants, healthcare endowments, collaborative efforts and organizational contributions.

2. Initiate Actions to Seek External Funding Resources to Advance Partnership Research Activities

It is also recommended that the Partnership be proactive in seeking external funding for plans, projects and programs necessary to address NEMT needs. There are a number of healthcare and transportation grants and endowment funding program possibilities that should be explored, such as:

- ❑ Robert Wood Foundation Grants
- ❑ The California Endowment
- ❑ Tobacco Settlement Funds
- ❑ Federal Transit Administration Sections 5311 and 5313

At present the issue of NEMT is considered throughout the State of California and the country as a worthwhile research topic. There is a desire to achieve greater understanding of NEMT and related healthcare issues, as well as, a push to develop and implement plans, projects and programs that address these issues. Funding obtained in the short-term should be used to finance an aggressive research and healthcare consumer information agenda.

3. Conduct Directed Research to Ascertain the Incidence of Missed Medical Appointments in the Target Area To Include all Segments of the Study Population
It is recommended that the Partnership expand upon the research and investigative efforts begun as a result of this study. The data collection and GIS analysis was effectively limited because of a lack of essential data and information.

These additional research activities will supplement the findings of this study, and provide concrete direction to the Regional Partnership on development of plans and projects. The results should also be used to as justification for the Partnership in their efforts to gain the necessary financial support and resources from funders and supporters to address identified deficiencies in NEMT in the study area.

Therefore, we recommend that the Partnership initiate projects for the purpose of collecting additional data on missed medical appointments from a larger audience to include segments of the population that are underrepresented in this study. Conceivably, this can be accomplished in one of two ways:

- **Conduct another more in-depth telephone survey directed at a wider range of those individuals who missed medical appointments due to lack of transportation in the target destination area or expand to include the Inland Empire as a whole.** The survey questions would be expanded and the interview questions designed to "drill down" to those missing medical appointments due to lack of transportation. The survey can also collect and measure other critical information such as home origins and medical destinations, healthcare affiliation (if any), demographics, propensity to use public transportation, and other information deemed relevant. The survey sample should be large enough to map at zip code and street intersection level. This method of data collection is reliable, but can also be cost-prohibitive.

- **Design a pilot project for collection of missed appointment data at Partnership healthcare organizations, facilities, and clinics in the target destination area.** This project could be conducted over a 6-12 month period and would test the efficacy of collecting missed appointment data, as well as, provide a clearer picture of the need for non-emergency medical transportation needs. The data would need to be collected by a number of healthcare organizations and medical facilities to be of value, but would provide "real-time" information on missed medical appointments. Under this scenario, interpretation of HIPAA restrictions may become an issue and will need to be addressed prior or during research design.

<u>Supplemental Data Collection and Research Efforts</u>

Other types of healthcare and transit data should also be collected and evaluated as feasible. This data should include:

- Health plan member data to include other segments of the population, including seniors, disabled and those under employer-sponsored health care programs (e.g. where they reside (address, zip code) age, ethnicity, disability, number of medical visits, types of non-emergency care, etc.);

- Health plan facility data including locations (addresses and zip codes), non-emergency medical specialties served, etc.; and

- Riverside data relative to location of medical facilities and origins and destinations of demand-responsive trips;

Utilizing consumer origin and destination data, a transit analysis should be conducted to ascertain proximity from home to transit stops, time of day service levels and frequencies to medical facilities, trip lengths, need for inter-regional service connections and other relevant information.

4. Work with Transit Agency/Operator Partners to Develop Transportation and Information Remedies to Close NEMT Gaps

The target segment profiles identified in the telephone survey and the GIS analysis closely resemble the transit dependent transit rider. Public transportation agencies and operators have considerable experience in "speaking" to this segment of the population, and can offer valuable input and assistance to healthcare in addressing transportation deficiencies for these individuals. NEMT programs nationwide provide some level of transit subsidy, offer bus passes and distribute transit information to clients as a core program element. In addition, there may be some potential in the future for contracting with transit for delivery of services. The Regional Partnership should seek opportunities to leverage the expertise and resources of all partner organizations and agencies in the design of strategies to address NEMT needs.

5. Consider and Extend Way-Finding Study Efforts to Other Medical Settings

Transit or prospective transit users traveling to large medical centers for non-emergency medical trips face potentially daunting way finding challenges, which include but are not limited to:

- ❑ Signage and directional assistance
- ❑ Trip planning
- ❑ Missed connections
- ❑ Incomplete and unclear transit information

A pilot project developed by an ad hoc subcommittee of this study, comprised of transit and healthcare representatives will commence a pilot project designed to improve the quality of the "way finding" experience for existing and potential riders. The pilot project: Way Finding for Transit Users to Large Medical Centers, involving Loma Linda University Medical Center will be conducted and completed before June, 2005.

It is recommended that members of the Partnership consider the value of the findings of this pilot project, and if warranted, work to assist in expansion of this project to other medical settings. This project has the potential to increase transit utilization for those wishing to travel to their medical appointments using public transportation.

6. Develop an Action Plan Based Upon the Findings of Research and Data Collection Activities

Based upon the results of the supplemental research efforts recommended as a part of this study, the Regional Healthcare/Transportation Partnership should develop a focused, multi-phase plan for development and gradual implementation of pilot transportation service-delivery projects, consumer information projects, and other strategic remedies designed to address the need for NEMT in the study area. The action plan should serve as a "blueprint" for implementation of projects and continuing development of financing mechanisms to support project implementation. The plan should include elements such as:

- ❑ Project purpose, goals and objectives
- ❑ Project location
- ❑ Supporting research and data
- ❑ Plan for quantitative measurement of project success
- ❑ Timeline and schedule for implementation
- ❑ Project funding sources

Service delivery projects design would most likely resemble a full or modified brokerage or transportation management operation. The broker may a Regional Partnership organization or agency, or administration and management of the transportation program or may be outsourced to a private for profit or nonprofit entity. If properly managed, brokerage programs serve to reduce costs, administrative burden, and incidence of fraud and abuse.

The Action Plan should be developed, reviewed and approved for implementation by Partnership members to ensure continued commitment and participation by all parties.

Other recommendations

The following recommendations should be considered for implementation either by the Regional Partnership or other identified entities, as follows:

- At this time limited information has been made available specific to actual expenditures and trips provided to members by healthcare organizations. In an effort to obtain a practical understanding of the actual costs to provide transportation services by healthcare organizations in the study area. Healthcare organizations should conduct a of review current transportation expenditures relative to the services provided to healthcare members, in order to achieve a greater understanding of the level of financial and operational resources expended on NEMT.

- Public transit agencies and operators in both counties should work cooperatively to develop relationships and establish formal coordinated mechanisms to improve inter-regional connectivity within the study area.

- In the short term, it may be advisable for transit operators to examine the feasibility of re-establishing the Greyhound bus pass purchase program for those who wish to access this service for inter-regional trip making.

- The State of California in their efforts to allocate transportation funding the healthcare organizations in a more cost-effective manner, should take steps to re-examine, and if necessary, modify funding policies and priorities to ensure that State funding policies are consistent with Federal regulations.

- As deemed appropriate, healthcare organizations and partner agencies should participation in advocacy efforts to expand use of Medi-Cal transportation funding in California to all eligible users.

13.3 Conclusion

The State of California should continue to consider the overall impacts of its current funding policies and practices relative to non-emergency medical transportation. Although a major stakeholder and funder of this study effort under the auspices of the California Department of Transportation (Caltrans), the State's policies and practices relative to funding medical transportation under Medi-Cal (i.e., assistance based upon physical ability and not economic need) is inconsistent with many other states, and contrary to Federal regulations. The issue of allowing the expenditure of Medi-Cal funding for medical transportation purposes for low income Medi-Cal recipients must be recognized and accepted as a critical core issue in the State's efforts to identify and further local efforts to address NEMT needs statewide.

On the healthcare front, the responsibilities associated with delivering medical treatment and services day-to-day, limits the ability of any one healthcare organization to address the NEMT issue for anyone other than their own members. Healthcare organizations in the study area have the opportunity to adopt a "new vision" and approach to addressing NEMT needs. The complexity of NEMT issues in the study area will require understanding of the issues, cooperation and on-going commitment. Although addressing the cost implications associated with missed medical appointments was not within the scope of this study, it goes without saying that the financial burden of missed medical appointments will rest squarely upon the shoulders of the healthcare system, including those appointments made by consumers, and those appointments that cannot be made due to lack of transportation.

It is interesting to note that the target segment of the population identified in this study, closely matches that segment of transit rider traditionally identified by the transit industry as "transit dependant". However, the type of specialized service delivery needed to address NEMT need falls outside the scope of mass transportation, and is typically reserved for elderly and disabled populations by both transit and healthcare. Providing transit options in low density areas has traditionally been a problem for the transit industry.

This study has shown that although local fixed-route service coverage is good in all areas of the study, implementation of inter-regional services should become a priority for transit agencies and operators. Implementation of these types of service options would simultaneously improve mobility within the study area for transit riders as well as, for those individuals needing to access medical appointments.

Stepping back to consider the obvious similarities of the transit dependent rider currently using public transit and that segment of the population in the Inland Empire demonstrating a need for transportation to their medical appointments, as well as, the rapidly changing socioeconomic conditions in the Inland Empire, does suggest that in-depth "destination-based" information (e.g., home origin and destination zip codes, time of day travel, etc.) would logically assist transit operators in developing services that better replicate the travel patterns of study area residents. This type of data could be collected as a component of on-board, customer satisfaction and other surveys efforts conducted by transit operators and would serve as a valuable tool the designing more productive services, based upon demonstrated demand.

The actions necessary to effectuate change in the study area cannot be accomplished in a vacuum. Healthcare organizations will need to work cooperatively with the State, transit agencies and operators, social service agencies, as well as, regional healthcare and transportation agencies, health care advocates and funders to begin to break down the barriers that have stifled progress in addressing NEMT needs in the Inland Empire. The project team recommendations were developed in recognition of the fact that there is *"no one answer, and no one-time answer",* and that each recommended action must individually and collectively serve to enhance and support the overall objective of addressing NEMT need in the study area.